DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII   Subject – Business Studies

Time – 3 Hours   Maximum Marks- 80

GENERAL INSTRUCTIONS:-
- This question paper contains 34 questions.
- Marks are indicated against each question.
- Answers should be brief and to the point.
- Answers to the questions carrying 3 marks may be from 50 to 75 words.
- Answers to the questions carrying 4 marks may be about 150 words.
- Answers to the questions carrying 6 marks may be about 200 words.

1. Yamini received a special gold coin from her school management for exceptionally good board results of her student's in her subject. Identify the need of Yamini being fulfilled as per Maslow 's Need Hierarchy Theory?
   (a) Esteem Needs
   (b) Belongingness Need
   (c) Self Actualization Need
   (d) Basic Physiological Needs   (1)

2. According to the United Nations environmental agency the world produces around 300 million tons of plastic each year half of which contributes single use items. Ford is recycling over one billion plastic bottle every year to develop elements of the car's interior reducing the amount of plastic ending up in Landfill. The American car maker has revealed that their Romanian built EcoSports SUV's carpets are made using 470 recycled single use plastic bottles. The process of making Ford EcoSport carpets involves shredding bottles and their caps into tiny flakes and then heating them to 260 degrees centigrade. Identify the related dimension of business environment.
   (a) Economic environment
   (b) Social environment
   (c) Technology dimensions
   (d) Political dimension   (1)

3. Every member of a department willingly cooperate and work as manager has to co-ordinate the efforts of different people in a conscious manner. Identify the characteristics of coordination discussd above.
   (a) Coordination shows unity of action
   (b) Coordination is a deliberate function
   (c) Coordination is a continuous process
   (d) Coordination is an all pervasive function   (1)

4. The next step in the "selection process "after selection process after selection decision is
   (a) Job offer
   (b) Medical examination
   (c) Selection Tests
   (d) Contract of Employment   (1)

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5. Sheela went to a free eye camp and got her eyes operated for cataract the surgery was not done properly due to which she lost the vision. Where can she go and file a complain Unde Consumer Protection Act.
   (a) District forum
   (b) State Commission
   (c) National Commission
   (d) None of these   (1)

6. Astra builders had to deliver the flats to its buyers on time. Due to this there is a sudden rush of work, Therefore the company needs to arrange workers to work at the sites at a short notice. The source of recruitment which may be used by the company to tap the Casual Vacancy is
   (a) Direct recruitment
   (b) Advertisement
   (c) Recommendation of employees
   (d) Employment exchange   (1)

7. Statement 1 .The concept of product relates to not only the physical product but also the benefits offered by it from customers point of view.
   Statement 11.The concept of product does not include the extended product by way of after -Sale services availability to spare parts handling complaints etc .
   Alternatives
   (a) both statement are correct
   (b) both statement are incorrect
   (c) Statement I is correct and statement II is incorrect.
   (d) Statement I is incorrect and statement II is correct.   (1)

8. Match the various characteristics of business environment given in column I and column II with their respective explanations

Column I	Column II
A. Dynamic Nature.	i) Environment is a phenomenon that is relatively easy and in parts but difficult to grasp in its totality.
B. Complexity.	ii) Business environment differs from country to country and from region to region.
C. Relativity.	iii) Business Environment keeps on changing whether in terms of Technological improvement or shifts in consumer preference

   Codes
   (a) (iii), (ii),(i)   (b) (ii),(iii),(i)
   (c) (iii) , (i) ,(ii)   (d) (i), (ii),(ii)   (1)

10. The process of holding security in the electronic form is called demateralisation. Which of the following statement does not relate to dematerialisation.
    (a) Smooth transfer and settlement of trade through a single account in shares .
    (b) Demat securities can be pledged or hypotheticated to get loans
    (c) No danger of loss or theft or forgery of shares certificate
    (d) Existing physical shares cannot be converted into electronic form.   (1)

MCQ 11 to 14 is with reference to the below case

Mr .Bose is running a successful business. Mr. Bose is the owner of R.K .Cement Ltd. Mr. Bose decided to expand his business by acquiring a steel factory. This required an investment of Rs. 60 crores .To seek advise in this matter he called his financial advisor Mr T. Ghosh who advised him about the judicious mix of the Equity 40% and Debt 60%. Employ more of cheaper debt may enhance the EPS. Mr. Ghosh also suggested him to take loan from the financial institution as the cost of raising funds from financial institution is low. Though this will increase the financial risk but will also raise the return to equity shareholders. He also a praised him that issue of Debt will not dilute the control of the equity shareholders at the same time the interest on loan is a tax deductible expense for computation of tax liability. After due deliberations with Mr . Ghosh, Mr .Bose decided to raise funds from a financial institution.

11. Identify the concept of financial management advised by Mr. Ghosh in the above situation
    (a) Capital Budgeting
    (b) Capital structure
    (c) Dividend Decision
    (d) Working Capital Decision   (1)

12. In the above case Mr. Ghosh suggested to raise more funds from Debt. Higher debt- equity ratio results in -----------
    (a) lower financial risk
    (b) higher degree of operating risk
    (c) higher degree of financial risk
    (d) higher earning of profits   (1)

13. Mr.T. Ghosh who advised him about the judicious mix of equity 40% and debt 60% the proportion of debt in the overall capital is called
    (a) working capital
    (b) financial leverage
    (c) Total assets
    (d) None of these   (1)

14. Employ more of cheaper debt may enhance the EPS such practice is called.
    (a) Equity trading
    (b) Financial leverage
    (c) Investment decision
    (d) Trading on equity   (1)

15. Read the following Assertion and Reasons
    Assertion (A) Informal organisation satisfied social needs of the members which is not satisfied in the formal organisation.
    Reason (R) In the case of informal organisation people are under pressure to observe group norms if such norms are against the interest of the formal organisation.
    (a) If both Assertion and Reason are true and the Reason (R) are correct explanation of Assertion (A).
    (b) If both Assertion and Reason are true but Reason (R) is not the correct explanation of Assertion (A).
    (c) Assertion is true but the Reason is false.
    (d) Assertion is false but the Reason is true.   (1)

16. Name the function of management which helps in the formulation of the future plans in the light of the problems that were identified and does helps in better planning in the future period
   (a) Planning
   (b) Organising
   (c) Directing
   (d) Controlling (1)

17. Radha started the home cooked food delivery Dhaba service. Her mother who is the great cook decided to help her .They relied on friends and family for this and then on word of mouth.
   As a step in the process of ensuring that activities are performed as per her plan of supplying healthy good quality reasonable food and earning profit .She decided to keep both qualitative and quantitative Benchmarks towards which she would Strive to work. A function of management is being discussed about and important characteristic of this function of management is
   (a) It is the first function of management
   (b) It is the last function of management
   (c) It is both forward looking and backward looking.
   (d) It is required only in business organisation (1)

18. According to the Consumer Protection Act 2019 the consumer has the right to get relief in case the product or service falls short of his expectations. Which consumer right is discussed in the above statement
   (a) Right to be heard
   (b) Right to be assured
   (c) Right to seek redressal
   (d) Right to safety (1)

19. It is a market for the buying and selling of previously issued or existing securities
   (a) Capital market
   (b) Money market
   (c) Scondary market
   (d) Primary market (1)

20. The objective of which of the following technique of scientific management is to determine the number of workers to be employed in an organisation
   (a) Method study
   (b) Motion study
   (c) Time study
   (d) Differential piece wage system (1)

21. Pushpanjali Ltd. is manufacturing chocolates, biscuits, cakes and other similar products. The company is not generating enough profits. Saurabh, the Marketing Manager of the company got a survey conducted to find out the reasons.

The findings of the survey revealed that in spite of better quality, the customers were not able to distinguish the products of the company from its competitors. Though the customers wanted to buy the products of 'Pushpanjali Ltd.' again and again because of its good quality, but they were not able to identify its products in the market.

Because of this, the sales of the company could not pick up resulting in inadequate profits. Saurabh, the Marketing Manager now realised that 'Pushpanjali Ltd.' had forgotten to take one of the most important decisions related to the product.

What decision should 'Pushpanjali Ltd.' take so that its customers are able to identify its products in the market? Explain the benefits that may result of 'Pushpanjali Ltd.' and its customers if the above decision is taken. (3)

OR

Your company has set up a food processing unit in Kashmir with the production capacity of 10,000 litres of apple juice per day. The company plans to market the apple juice in **TETRA PACK** of 100 ml. Design a label for the same.

22. Neeraj sales representative of Omega limited has changed seven jobs in the last one year he is a hardworking person but is not able to finalize deals with the customers due to his inadequate vocabulary and omission of needed words sometimes he uses wrong words because of which intended meaning is not conveyed
All these created a misunderstanding between him and his Clients
(i) Identify the communication barrier discussed above
(ii) State the category of communication barrier and explain.

(iii) Explain any other communication barrier of the same category. (3)

OR

What are the three elements of Motivation Explain. State and explain two nonfinancial incentives.

23. (i) State the steps in screen based trading for buying and selling of securities.
(ii) Explain the first two steps of trading in correct order. (3)

24. State any three characteristics of management

OR

(i) State any two functions performed by Top level management
(ii) State the designation of this level (any four) (3)

25. The court passed an order to ban polythene bag as.
(i) These bags are creating many environmental problems which affect the life of the people in general. Society in general is more concerned about the quality of life.
(ii) The government decided to give subsidy to jute industry to promote this business.
(iii) Innovative techniques are being developed to manufacturing bags at low rates.
Identify the different dimensions of Business environment by quoting the lines from the above particulars. Any three and explain the dimensions. (3)

26. Mrs. Ahilya Pasi is the principal of a prestigious school in New Delhi .The School has a vacancy of Headmistress/ Headmasters of the junior wing of the school. The senior teachers of the school have the opinion that only internal candidate should be considered for this post .However Mrs Pasi and the management would like to invite application from external sources too.
Briefly explain any four justification the management can provide to consider and convince the staff for inviting applications from the external candidate for the vacant post. (4)

OR

Explain the following
(a) Vestibule Training
(b) Audio Visuals
(c) Programmed Instructions
(d) Case Study
also discuss the suitability of all the above.

27. Huma is working in a company on permanent basis. As per the job agreement she had to work for 8 hours a day and was free to work overtime. Huma worked overtime due to which she fell sick and had to take leave from her work. No one showed concern and enquired about her health. She realized that she is fulfilling only some of her needs while some other needs still remained to be fulfilled.
    (i) By quoting lines from the above para identify the needs of Huma which she will be able to fulfill.
    (ii) Also explain other needs of Huma followed by the above needs which still remained to be satisfied. Also draw the diagram for Abraham Maslow's need hierarchy. (1+2+1)

28. Explain the steps in the controlling process (any four)
                                    OR
    Explain
    (i) Critical point control and
    (ii) Management by exception as an important part of analysing deviation as a step in the process of controlling. (4)

29. Explain (a) Fatigue study and Motion study
              (b) Differential Piece rate system. (4)

30. Packaging has acquired great significance in the marketing of goods. In the light of this statement state any four functions of packaging (4)
                                    OR
    Explain any four functions of Marketing

31. Mr Sanjay Nehra was the chairman of the " Taran Bank". The bank was earning good profits. Shareholders were happy as the bank was paying regular dividends .The market price of their shares was also steadily rising. The bank was about to announce taking over of" Vena bank". Mr Sanjay Nehra knew that the share price of " Taran Bank" would rise on the announcement. Being a part of the bank he was not allowed to buy shares of the bank. He called one of the rich friends Sudhir and asked him to invest Rs. 5crores in shares of his bank promising him the capital gains. As expected the share prices went up by 40 percent and the market price of the Sudhir's share was now Rs. 7crores. He earned profit of Rs. 2 crores, He gave Rs.1crore to Mr Sanjay Nehra and kept Rs.1crore with himself. On regular inspection and by conducting enquiries of the brokers Involved Securities Exchange Board of India (SEBI) was able to detect this irregularity. The SEBI-imposed heavy penalty on Mr Sanjay Mehra.
    (a) By quoting the lines from the above para, identify and state any two functions that were performed by SEBI in the above case.
    (b) Also state any other two functions other than mentioned above. (4+2)

32. Distinguish between Delegation and Decentralisation on the basis of
    (a) Purpose ,
    (b) Freedom of action ,
    (c) Status
    (d) Scope.
                                    OR
    Distinguish between Functional Structure and Divisional Structure on the basis of
    (a) Span of Management,
    (b) Cost
    (c) Coordination ,
    (d) Managerial Development. (6)

33. (1) Explain single use plan and Standing Plan and two types of each.

   (2) Vadan Patel started the business of preparation and supplying sweets to home delivery at a production cum show- room "Express Sweets at Ahmedabad". He made a plan forecasting the sales of different type of sweets in various localities of Ahmedabad for each month of the year to earn a profit of 20% on capital employed.

   He said the sales target of 20 lakhs in the current year with the 10% increase every year.

   He then set the criteria for selecting suppliers from whom he would make purchases of raw materials .The planning paid off and business was able to achieve its target.

   Identify any three types of plans by quoting the lines from the above

   Also give meaning of the type of the plans identified in part (2) above.   (6)

34. State any three points that highlights the importance of Consumer Protection from the consumers point of View

                                   OR

   Explain the following rights
   (a) Right to consumer Education
   (b) Right to seek redressal
   (c) Right to safety.   (6)

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Class - XII
Time – 3 Hours

Subject – History
Maximum Marks- 80

General Instructions:
- The paper has been divided into five sections - A, B, C, D and E. There are 34 questions in the question paper. All questions are compulsory.
- Section A: Question no. 1 to 21 are MCQs of 1 marks each.
- Section B: Question no. 22 to 27 are short Answer type questions carrying 3 marks each. Answer to each question should not exceed 60-80 words.
- Section c: Question no. 28 to 30 are long Answer type questions carrying 8 marks each. Answer to each question should not exceed 300-350 words
- Section D: Question no. 31 to 33 are Source based questions with three sub questions and are of 4 marks each.
- Section E: Question no. 34 is Map based, carrying 5 marks that includes the identification and location of significant test items. Attach the map with the answer book.
- There is no overall choice in the question paper. However, an internal choice has been provided in few questions have to be attempted.
- In addition to this, separate instructions are given with each section and question, wherever necessary.

SECTION – A
OBJECTIVE TYPE QUESTIONS (21 x 1 = 21)

1. Which of the following options accurately describes the significance of the Sangam Age in the context of literature?
   A. It marked the introduction of Sanskrit literature in South India.
   B. It was a period of decline in literary activities in Tamil Nadu.
   C. It witnessed the flourishing collection of ancient Tamil literature.
   D. It was characterized by the dominance of Greek literature in India.

2. To which one of the following dynasties did raja Gotami-puta Siri-Satakani belong?
   A. Vakataka
   B. Satvahana
   C. Kushan
   D. Gupta

3. Identify the ruler of India in the 1850s from the given options using the provided information.

   I. He was the successor to Peshwa Baji Rao II
   II. He was compelled by sepoys and the towns people to join the revolt as their leader from Kanpur.
   A. Nana Sahib
   B. Kunwar Singh
   C. Birjis Qadr
   D. Maulvi Ahmadullah Shah

1

4. Consider the following statements regarding Buddhism and choose the correct option.
   I. The concept of Bodhisattva is central to Hinayana sect of Buddhism.
   II. Bodhisattva is a compassionate one on his way to enlightenment.
   III. Bodhisattva achieve nibbana for personal salvation.
   Options
   A. II & III
   B. I & III
   C. I & II
   D. I ,II & III

5. Who found Harppan seals in Mohenjodaro?
   A. Daya Ram Sahni
   B. Rakhal Das Banerjee
   C. John Marshall
   D. R.E.M. Wheeler

6. The Sudarshan Lake was originally built by Pushyagupta, the governor of Saurashtra under Chandragupta Maurya. Who among the following rebuilt it without taking any new tax for that?
   A. Vikramaditya II
   B. Bhaskaravarman
   C. Bimbisara
   D. Rudradaman

7. Which of the following were the key ideals associated with the social struggles in India since the nineteenth century?
   A. Autonomy, hierarchy, and traditionalism
   B. Democracy, equality, and justice
   C. Imperialism, colonialism, and bureaucracy
   D. Monarchy, privilege, and conservatism

8. Which of the following skills can be identified from Al-Biruni's writings?
   A. Proficiency in diplomacy and political negotiation.
   B. Fluency in multiple languages and a broad intellectual curiosity.
   C. Expertise in military strategy and warfare tactics.
   D. Exceptional talent for storytelling and vivid descriptions.

9. Which of the following statements is incorrect about Andal?
   A. Andal was a woman Alvar, her compositions were widelysung.
   B. Andal was a woman Nayanar, she incorporated the prevailing caste system in the society.
   C. Andal saw herself as the beloved of Vishnu; her verses express her love for the deity.
   D. Andal saw herself as the beloved of Krishna; her verses express her love for the deity.

10. Imagine you are analysing a historical document from the Vijayanagar Empire. Which of the following documents would be most helpful in understanding the relationship between the empire and religious institutions?
    A. A military chronicle detailing the conquests of a Vijayanagar rulers.
    B. A record of diplomatic exchanges with traders and foreign ambassadors.
    C. A legal code outlining the rights and responsibilities of urban classes.
    D. An imperial decree granting land or privileges to a sacred organization.

11. Match the column I with column II regarding the travellers who visited the Vijayanagar empire and choose the correct option.:

	Column I		Column II
a	Nicolo de Conti	i	Ambassador of Persia visited in the 15th century.
b	Abdur Razzaq	ii	Italian trader who visited in the 15th century.
c	Afanasii Nikitin	iii	Portuguese traveller who visited in the 16th century.
d	Duarte Barbosa	iv	Merchant from Russia who visited in the 15th century.

     (a) (b) (c) (d)
A. (iii) (i) (ii) (iv)
B. (iii) (iv) (i) (ii)
C. (i) (ii) (iii) (iv)
D. (ii) (i) (iv) (iii)

12. Which of the following developments significantly contributed to the increased flow of silver bullion into India through trade with Europe during the 16th-18th centuries?
   A. The rise of the Ottoman Empire in Asia
   B. The opening of the new world through voyages
   C. The Ming Dynasty's expansion into Southeast Asia
   D. The decline of the Safavid Empire in Asia

13. How did the compilation of the Ain-i Akbari contribute to Emperor Akbar's vision of governance? Choose the best suitable option from the following.
   A. By emphasizing military strategies for territorial expansion.
   B. By documenting religious rituals and practices across the empire.
   C. By providing information on administrative and cultural traditions.
   D. By focusing on trade routes and economic policies.

14. What insights did Francois Bernier provide about the economic structure of Mughal India? Choose the best suitable option from the following.
   A. The prevalence of private land ownership and equitable distribution of wealth.
   B. The dominance of state-controlled resources and limitations on private property.
   C. The absence of trade networks and economic isolation from global markets.
   D. The reliance on foreign investments and the absence of indigenous industries

15. Compare and contrast the impacts of the American Civil War on cotton production in India and the United States. Choose the best suitable option from the following.
   A. Both countries experienced a decline in cotton production due to the war.
   B. India's cotton production increased while the United States experienced a decline.
   C. The United States saw increased cotton production while India's remained stagnant.
   D. Both countries saw a surge in cotton exports during the war period

16. Why did the rebellion in Awadh become a symbol of resistance against British rule? Choose the best suitable option from the following.
   A. Due to the region's economic prosperity under native rule
   B. Due to the displacement of Nawab Wajid Ali Shah and taluqdars
   C. Due to favourable land revenue policies towards the peasantry
   D. Due to Awadh 's central position for organizing rebel forces

3

17. Which of the following represents the correct chronological order of events related to agrarian developments in India during the 19th century?
    I. The Permanent Settlement in Bengal
    II. The Deccan Riots Commission
    III. The Santhal Rebellion
    IV. The Fifth Report by a Select Committee.
    Options:
    A. I, II, III & IV
    B. II, III, IV & I
    C. III, II, I & IV
    D. I,IV,III & II

18. Which one of the following was the Gandhi's main demands for the peasants in Champaran?
    A. Increase in minimum wages of workers
    B. Freedom to cultivate the crops of their choice.
    C. Reduction in government taxes for social classes
    D. Indian education for all farmers' children

19. Complete the following with the correct option regarding the role of leaders in the history of nationalism of their respective countries. Ho Chi Minh: Vietnam, George Washington: -----------
    A. USA   B. UK   C. France   D. Canada

20. Two statements are given in the question below as Assertion A and Reason R. Read the statements and choose the appropriate option.
    Assertion (A): Recovering artefacts is merely the initial step in the archaeological process.
    Reason(R): Archaeologists employ various methods such as classification based on material and function, analysis of contextual clues, and reliance on indirect evidence to understand the significance and purpose of artefacts.
    Options:
    A. Both (A) and (R) are correct and (R)is the correct explanation of (A)
    B. Both (A) and (R) are correct, but (R) is not the correct explanation of (A)
    C. (A) is correct, but (R) is not correct
    D. (R) is correct, but (A) is not correct.

21. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R).
    Assertion (A): Of the groups of sufis who migrated to India in the late twelfth century, the Chishtis were the most influential.
    Reason (R): They adapted successfully to the local environment and adopted several features of Indian devotional traditions.
    (a) Both (A) and (R) are correct, but (R) is not the correct explanation of (A).
    (b) Both (A) and (R) are correct and (R) is the correct explanation of (A).
    (c) (R) is correct, but (A) is not correct.
    (d) (A) is correct, but (R) is not correct.

SECTION B
SHORT ANSWER TYPE QUESTIONS (6 x 3 =18)

22. **A.** How did the philosophical and religious developments during the first millennium BCE in India influence the socio-political aspects? Explain with examples.
    OR
    B. How did the construction of stupas contribute to the spread of Buddhist teachings? Explain with examples

4

23. How does the Mahabharata show the multicultural nature of ancient Indian society? Explain with examples.

24. **A.** Examine the impact of Bhakti and Sufi poetry on the development of regional languages and literature.

<div align="center">OR</div>

   B. Examine how music and devotional songs in Bhakti and Sufi traditions serve spiritual expression and community unity.

25. Explain the term "Little Republics" as applied to villages during the Mughal period.

26. **A.** How did the Constituent Assembly address the issue of social justice, particularly concerning the rights of the people? Explain.

<div align="center">OR</div>

   B. Explain the distribution of powers between the Centre and the States, as debated in the Constituent Assembly, highlighting differing viewpoints and concerns.

27. Describe the role of Gandhiji as a social reformer

<div align="center">

SECTION-C
LONG ANSWER TYPE QUESTIONS (3 x 8 =24)

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28. **A.** Analyse the layout of Harappan cities to identify features that promoted cleanliness and public health.

<div align="center">OR</div>

   B. Examine the challenges historians face in deciphering the Harappan script.

29. 'Vijayanagar empire was characterised by a distinctive architecture and building styles.' Justify the statement.

30. **A.** Describe the aspirations and objectives of the rebels during the Indian Rebellion of 1857, as reflected in their proclamations and actions.

<div align="center">OR</div>

   B. What do visual representations tell us about the revolt of 1857? How do historians analyse these representations?

<div align="center">

SECTION D
SOURCE BASED QUESTIONS (3 x 4 = 12)

</div>

31. **Read the following source carefully and answer the questions that follow:**

<div align="center">Inscriptions</div>

Inscriptions are writings engraved on hard surfaces such as stone, metal, or pottery. They usually record the achievements, activities, or ideas of those who commissioned them and include the exploits of kings, or donations made by women and men to religious institutions. Inscriptions are virtually permanent records, some of which carry dates. Others are dated on the basis of palaeography or styles of writing, with a fair amount of precision. For instance, in c. 250 BCE the letter "a" was written like this: By c. 500 CE, it was written like this: The earliest inscriptions were in Prakrit, a name for languages used by ordinary people. Names of rulers such as Ajatasattu and Asoka, known from Prakrit texts and inscriptions, have been spelt in their Prakrit forms in this chapter. You will also find terms in languages such as Pali, Tamil, and Sanskrit, which too were used to write inscriptions and texts. It is possible that people spoke in other languages as well, even though these were not used for writing.

I. What role does palaeography play in determining the age of inscriptions?

II. How do inscriptions contribute to our understanding of ancient societies and cultures?

III. What insights can be gained from studying the languages used in inscriptions across different regions and time periods?

32. **Read the following source carefully and answer the questions that follow:**

Translating texts, sharing ideas

Translating texts, sharing ideas Al-Biruni's expertise in several languages allowed him to compare languages and translate texts. He translated several Sanskrit works, including Patanjali's work on grammar, into Arabic. For his Brahmana friends, he translated the works of Euclid (a Greek mathematician) into Sanskrit.

I. Analyse the advantage Al-Biruni gained from his expertise in multiple languages?

II. Analyse the significance of Al-Biruni translating Patanjali's work on grammar into Arabic?

III How did Al-Biruni's translations contribute to the mutual understanding and appreciation between Islamic and Indian civilizations?

33. **Read the following source carefully and answer the questions that follow:**
Why was salt the symbol of protest?

This is what Mahatma Gandhi wrote: The volume of information being gained daily shows how wickedly the salt tax has been designed. In order to prevent the use of salt that has not paid the tax, which is at times even fourteen times its value, the Government destroys the salt it cannot sell profitably. Thus, it taxes the nation's vital necessity; it prevents the public from manufacturing it and destroys what nature manufactures without effort. No adjective is strong enough for characterising this wicked dog-in-the-manger policy. From various sources I hear tales of such wanton destruction of the nation's property in all parts of India. Maunds if not tons of salt are said to be destroyed on the Konkan coast. The same tale comes from Dandi. Wherever there is likelihood of natural salt being taken away by the people living in the neighbourhood of such areas for their personal use, salt officers are posted for the sole purpose of carrying on destruction. Thus, valuable national property is destroyed at national expense and salt taken out of the mouths of the people. The salt monopoly is thus a fourfold curse. It deprives the people of a valuable easy village industry, involves wanton destruction of property that nature produces in abundance, the destruction itself means more national expenditure, and fourthly, to crown this folly, an unheard-of tax of more than 1,000 per cent is exacted from a starving people. This tax has remained so long because of the apathy of the general public. Now that it is sufficiently roused, the tax has to go. How soon it will be abolished depends upon the strength the people.

I. What does Gandhi's reference to the "power of peace and non-violence" suggest about his strategic approach to resistance against British colonial rule?

II. What parallels can be drawn between Gandhi's critique of the salt tax and broader movements for social justice and human rights?

III. How does Gandhi's reference to the destruction of salt by the government shed light on the broader implications of colonial policies on India's natural resources?

SECTION E
Map Based Question (1 x 5 = 5)

34. (34.1) On the given political map of India, locate and label the following with appropriate symbols:

I. Sanchi– A Stupa

II. Kalibangan - Indus Valley Site

III. (a) Panipat-Territory Under the Control of Mughals

OR

(b)Vijayanagar- Capital of Vijayanagar empire

(34.2) On the same outline map, two places have been star marked as 'A and B, as the centres of the Revolt of 1857 Identify them and write their correct names on the lines given.
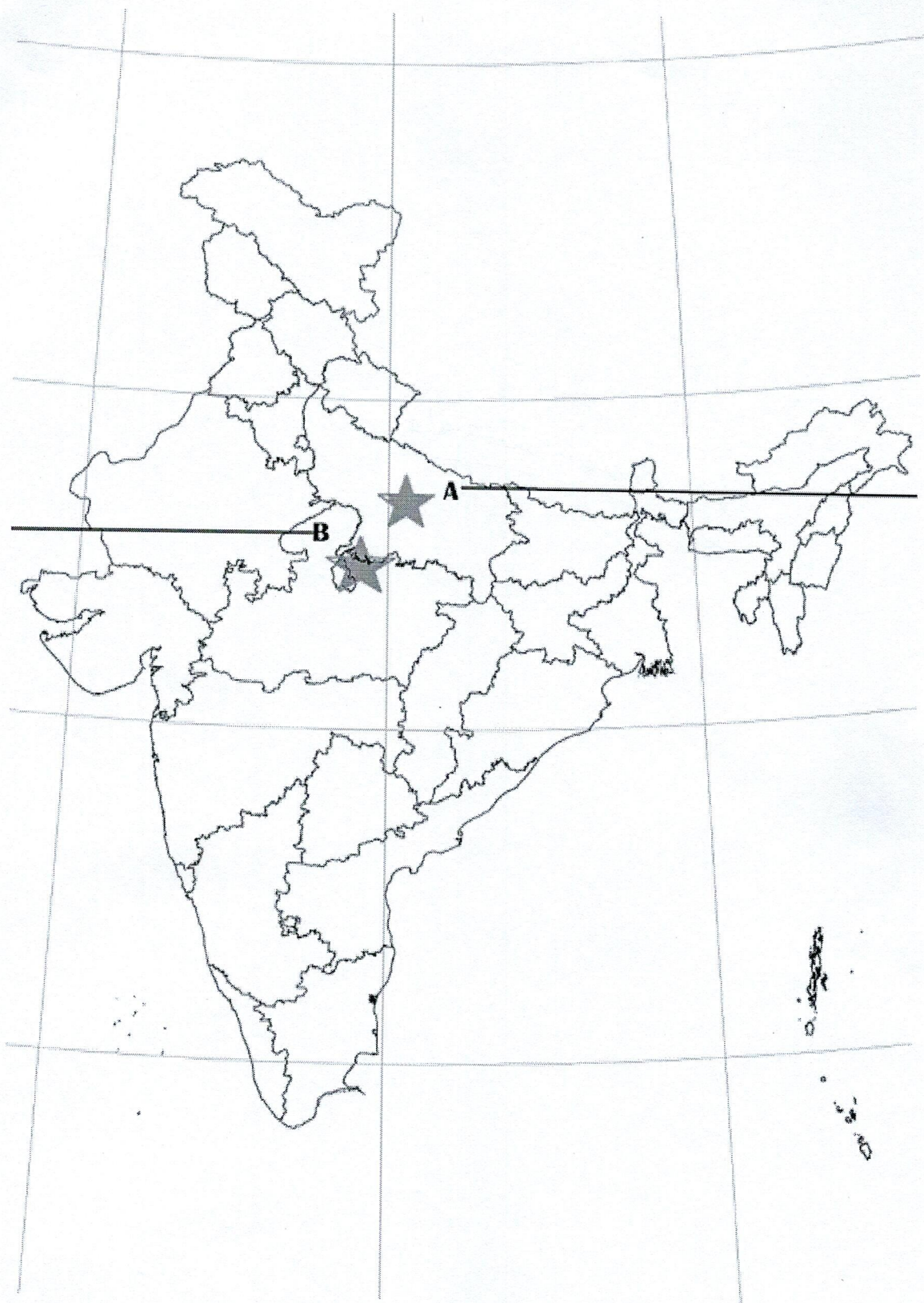
DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII   Subject – Accountancy
Time – 3 Hours   Maximum Marks- 80

GENERAL INSTRUCTIONS:
1. This paper comprises two parts – A and B. There are 34 questions in the question paper. All questions are compulsory.
2. Question nos. 1 to 16 and 27 to 30 carry 1 mark each.
3. Question nos. 17 to 20, 31 and 32 carry 3 marks each.
4. Question nos. 21, 22 and 33 carry 4 marks each.
5. Question nos. 23 to 26 and 34 carry 6 marks each.
6. There is no overall choice. However, an internal choice has been provided in 7 questions of one mark, 2 questions of three marks, 1 question of four marks and 2 questions of six marks.
7. Attempt all parts of a question together.
8. Draw proper formats and show working notes, where applicable.

PART A
(Accounting for Partnership firms and Companies)

1. X, Y and Z are partners in a firm sharing profits and losses in the ratio of 6 : 4 : 1. X guaranteed a profit of Rs. 15,000 to Z. The net profit for the year ended 31st March, 2020 was Rs. 99,000.
X's share in the profit of the firm will be ____
   (a) Rs. 30,000   (b) Rs. 15,000   (c) Rs. 48,000   (d) Rs. 45,000   [1]

   OR

   Vimal and Sunil were partners in a firm sharing profits and losses in the ratio of 3 : 2. Their fixed capitals were Rs. 1,20,000 and Rs. 2,40,000 respectively. They were entitled to interest on capital @ 10% p.a. The firm earned profit of Rs. 18,000 during the year. The interest on Vimal's Capital will be____
   (a) Rs. 12,000   (b) Rs. 10,800   (c) Rs. 7,200   (d) Rs. 6,000

2. "The business of a partnership concern may be carried on by all the partners or any one of them acting for all."
   Which of the following features of partnership is highlighted by the statement given above?
   (a) Mutual Agency   (b) Agreement
   (c) Sharing Profit   (d) Business   [1]

3. VK Ltd. issued 6,000 Equity Shares of Rs. 10 each at 10% Premium. The issue was fully subscribed. Amount per share was payable as follows:
   On Application Rs.3, On Allotment Rs.3 (including premium), On First Call Rs.3 and On Second and Final Call Rs.2. Mr. A, a holder of 200 shares paid the entire money along with the allotment. The amount received on Allotment will be____
   (a) Rs. 18,000   (b) Rs. 19,000   (c) Rs. 25,000   (d) Rs. 21,000   [1]

   OR

   Vama Ltd. forfeited 20 shares Rs. 10 each, Rs. 8 called up, on which Jatin had paid Application and Allotment money of Rs. 5 per share, of these, 15 shares were reissued to Pravin as fully paid up for Rs. 6 per share. What is the balance in the Share Forfeiture Account after the relevant amount has been transferred to Capital Reserve Account?
   (a) Rs. 5   (b) Rs. 25   (c) Rs. 100   (d) None of these

4. A and B are partners in a firm having capitals of Rs. 54,000 and Rs. 36,000 respectively. They admitted C for 1/3rd share in the profits. C brought proportionate amount of capital. The capital brought by C would be _____
   (a) Rs. 90,000   (b) Rs. 45,000   (c) Rs. 54,000   (d) Rs. 36,000   [1]

5. Maya, Tiya and Joya were partners in the ratio of 5 : 3 : 2. On 31st March, 2022, their books reflected a net profit of Rs. 2,10,000. As per the terms of the partnership deed they were entitled for interest on capital which amounted to Rs. 80,000 Rs. 60,000 and Rs. 40,000 respectively. Besides this a salary of Rs. 60,000 each was payable to Maya and Tiya.
   Calculate the ratio in which the profits would be appropriated.
   (a) 1 : 1 : 1   (b) 5 : 3 : 2   (c) 7 : 6 : 2   (d) 4 : 3 : 2   [1]

6. The amount of share capital which a company is authorized to issue by its Memorandum of Association is called _____
   (a) Issued Capital   (b) Subscribed Capital
   (c) Reserve Capital   (d) Nominal Capital   [1]

OR

The Debentures whose Principal Amount is not Repayable by the Company during its Life Time, but the Payment of such debentures is made only at the time of Liquidation of the Company are known as _____
   (a) Redeemable Debentures   (b) Irredeemable Debentures
   (c) Convertible Debentures   (d) None of these

7. **Assertion (A):** Interest on bearer debentures is paid to a person who produces the interest coupon attached to such debentures.
   Reason (R): Bearer debentures are debentures which can be transferred by way of delivery and the company does not keep any record of the debenture holders.
   Select the correct answer from the following:
   (a) Assertion (A) is correct, but Reason (R) is wrong.
   (b) Both Assertion (A) and Reason (R) are correct, but Reason (R) is not the correct explanation of Assertion (A).
   (c) Both Assertion (A) and Reason (R) are correct, and Reason (R) is the correct explanation of Assertion (A).
   (d) Both Assertion (A) and Reason (R) are wrong.   [1]

8. Pawan, Kavita and Gaurav were partners in a firm. The firm was dissolved. Creditors took over furniture of book value of Rs. 60,000 at 10% less than the book value in part settlement of their amount of Rs. 60,000. The balance amount was paid to them through cheque. The amount paid through cheque will be _____
   (a) Rs. 5,000   (b) Rs. 6,000   (c) Rs. 54,000   (d) Nil   [1]

9. Ajay and Vijay are partners in the ratio of 3 : 2. Their fixed capitals were Rs. 3,00,000 and Rs. 4,00,000 respectively. After the closure of accounts for the year it was observed that the Interest on Capital which was agreed to be provided at 5% p.a. was erroneously provided at 10% p.a. By what amount will Ajay's account be affected if partners decide to pass an adjustment entry for the same?
   (a) Ajay's Current A/C will be debited by Rs. 15,000
   (b) Ajay's Current A/C will be credited by Rs. 6,000
   (c) Ajay's Current A/C will be credited by Rs. 35,000
   (d) None of these   [1]

10. In which of the following conditions a partnership firm is dissolved by 'Agreement'?
    (a) In accordance with a contract between the partners
    (b) When a partner becomes insane
    (c) When the business of the firm becomes illegal
    (d) If any one of the partner gives a notice in writing to the other partners.   [1]

11. After making the adjustments regarding Drawings Rs. 40,000, Share of Profit Rs. 24,000 and the Additional Capital introduced Rs. 32,000,the Capital of Arun, a partner, as on 31/3/2022 was Rs. 5,00,000. His Capital as on 01/04/2021 was _____

    (a) Rs. 4,84,000   (b) Rs. 5,16,000   (c) Rs. 4,46,000   (d) Rs. 5,96,000   [1]

12. D Ltd. issued 80,000, 10% Debentures of Rs. 100 each at certain rate of discount and were to be redeemed at 20% premium. Existing balance of Securities Premium before issuing these debentures was Rs. 25,00,000 and after writing off Loss on Issue of Debentures, the balance in Securities Premium was Rs. 5,00,000. At what rate of discount, these debentures were issued?

    (a) 10%   (b) 5%   (c) 25%   (d) 15%   [1]

13. Given below are two statements, one labeled as Assertion(A) and the other labeled as Reason (R):

    Assertion (A): Balance in forfeited shares account represents a capital loss.

    Reason (R): Discount on reissue of forfeited shares cannot exceed the amount received on such shares.

    In the context of the above two statements, which of the following is correct?

    (a) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
    (b) Both (A) and (R) are true and (R) is the correct explanation of (A)
    (c) Both (A) and (R) are false.
    (d) (A) is false, but (R) is true.   [1]

14. Super Profit is equal to _____ less _____.

    (a) Actual Profit; Normal Profit   (b) Normal Profit; Actual Profit
    (c)Average Profit; Net Assets   (d) Assets; Outside Liabilities   [1]

    OR

    Pick the ODD ONE out:

    (a) Rent to Partner   (b) Manager's Commission
    (c) Interest on Partner's Loan   (d) Interest on Partner's Capital

15. C, D and E were partners in a firm sharing profits and losses in the ratio of 5 : 3 : 2.They admitted F as a new partner for 1/4th share in the profits which was sacrificed by C, D and E in the ratio of 2 : 1 : 2 . C's new share in the profits will be:

    (a) 2/5   (b) 3/5   (c) 3/10   (d) 4/20   [1]

    OR

    D, E and F were partners sharing profits and losses in the ratio of 3 : 2 : 1. E died on 30th June, 2017. Her share of profit for the intervening period was based on the sales during that period, which were Rs. 6,00,000. The rate of profit during the past four years had been 10% on sales. The firm closes its books on 31st March every year. E's share of profit till the date of her death is _____

    (a) Rs. 2,00,000   (b) Rs. 20,000   (c) Rs. 5,000   (d) None of these

16. X and Y were partners in a firm with capitals of Rs. 45,000 each. They admitted Y as a new partner for $\frac{1}{3}$rd share in the profits of the firm. Y brought Rs. 60,000 as his capital. Based on Y's share in the profits of the firm and his capital contribution, the goodwill of the firm will be _____

    (a) Rs. 1,80,000   (b) Rs. 1,50,000   (c) Rs. 30,000   (d) Rs. 90,000   [1]

17. On 01/04/2022, Rashi, Kashi and Aashi started a partnership firm with fixed capitals of Rs. 6,00,000, Rs. 6,00,000 and Rs. 3,00,000 respectively. The partnership deed provided for the following:

    (i) Interest on capital @ 10% per annum.
    (ii) Interest on drawings @ 12% per annum.
    (iii) An annual salary of Rs. 1,20,000 to Aashi.
    (iv) Profits and losses were to be distributed in the ratio of their capitals.

    The Net Profit of the firm for the year ended 31/3/2023 was Rs. 3,08,000. Interest on partners' drawings were Rashi Rs. 4,800, Kashi Rs. 4,200 and Aashi Rs. 3,000.

    Prepare Profit and Loss Appropriation account of the firm for the year ended 31/03/2023.   [3]

18. A, B and C sharing profits and losses in the ratio of 4 : 3 : 2, decide to admit D as a new partner with effect from 1st April, 2023. An extract of their Balance Sheet as at 31st March, 2023 is:

Liabilities	Rs.	Assets	Rs.
Investment Fluctuation Reserve	18,000	Investment (At cost)	2,00,000

Pass necessary Journal Entries for Investment Fluctuation Reserve in the following cases:
(i) If the market value of Investments is Rs. 1,91,000.
(ii) If the market value of Investments is Rs. 1,73,000. [3]

OR

Pass necessary Journal entries on dissolution of a partnership firm in the following cases:
(i) Jay, a partner, was appointed to look after the process of dissolution and was allowed a remuneration of Rs. 15,000. Jay agreed to bear dissolution expenses. Actual dissolution expenses Rs. 16,000 were paid by Vijay, another partner, on behalf of Jay.
(ii) Deepa, a partner, was to look after the process of dissolution and for this work she was allowed a remuneration of Rs. 7,000. Deepa agreed to bear dissolution expenses. Actual dissolution expenses Rs. 6,000 were paid from the firm's bank account.
(iii) A debtor of Rs.8,000 already transferred to Realisation Account agreed to pay the realization expenses of Rs. 7,800 in full settlement of his account.

19. BG Ltd. issued 2,000, 12% debentures of Rs. 100 each on 1st April, 2021. The issue was fully subscribed. According to the terms of issue, interest on Debentures is payable Half-Yearly on 30th September and on 31st March, every year.
Pass necessary Journal Entries related to the Debenture Interest for the Half-Yearly ending 31st March, 2022 and Transfer of Interest on Debentures of the Year to the Statement of Profit and Loss.
[3]

20. Palak, Giri and Hemant were partners in a firm sharing profits and losses in the ratio of 6 : 3 : 1. Giri retired. Palak and Hemant decided to share profits in future in the ratio of 3 : 2. On the day of Giri's retirement, Goodwill of the firm was valued at Rs. 1,00,000.
Calculate gaining ratio and pass necessary journal entry to record the treatment of goodwill on Giri's retirement.
[3]

21. Nitya Ltd. was incorporated on 1st April, 2022 with registered office in Mumbai. The Capital Clause of Memorandum of Association reflected a Registered Capital of Rs. 8,00,000 Equity Shares of Rs, 10 each and 1,00,000, 9% Preference Shares of Rs. 50 each.
Since some large investments were required for Building and Machinery, the company in consultation with vendors, M/s. Vipin Enterprises, issued 1,00,000 Equity Shares and 20,000, 9% Preference Shares at par to them in full consideration of assets acquired. Besides this the company issued 2,00,000 Equity Shares at par, for public subscription, payable as Rs. 3 on Application, Rs. 2 on Allotment, Rs. 3 on First Call and Rs. 2 on Second and Final Call. The issue was fully subscribed.
The second and final call has not been made yet and all the shareholders have paid except
Mr. Sujoy, who did not pay Allotment and First Call on his 300 shares and Vijoy, who did not pay the First Call on his 200 shares. All the Shares of Mr. Sujoy were forfeited and out of which 100 shares were reissued for Rs. 12 per share, as Rs. 8 paid up.
You are required to answer the following questions based on the above information: [4X1=4]
(i) Shares issued to vendors of Building and Machinery, M/S Vipin Enterprises, would be classified as
_____

(a) Preferential Allotment
(b) Employee Stock Option Plan
(c) Issue for Consideration other than cash
(d) Rights Issue of shares

(ii) What is the amount of Securities premium reflected in the Balance Sheet at the end of the year?
(a) Rs. 200   (b) Rs. 600   (c) Rs. 400   (d) Rs. 1,000

(iii) What amount of Share Forfeiture would be reflected in the Balance Sheet?
(a) Rs. 600   (b) Rs. 900   (c) Rs. 200   (d) Rs. 300

(iv) Authorised Capital of Nitya Ltd.is _____
   (a) Rs. 80,00,000   (b)Rs. 50,00,000   (c) Rs. 1,30,00,000   (d) None of these

22. X, Y and Z were partners sharing profits and losses equally. Y died on 1st October 2023 and total amount transferred to Y's executors was Rs. 15,60,000. Y's executors were being paid Rs. 3,60,000 immediately and the balance was to be paid in four equal quarterly instalments, together with interest @ 6% p.a. Pass journal entries till payment of FIRST TWO INSTALMENTS.   [4]

23. Krishna Ltd. invited applications for issuing 2,40,000 Equity Shares of Rs. 10 each at a premium of Rs. 4 per share. The amount was payable as under.

   On Application   –   Rs. 4 per share (including premium Rs. 2)
   On Allotment   -   Rs. 4 per share
   On First and Final Call -   Rs. 6 per share (including premium Rs. 2)

   Applications for 3,00,000 shares were received and Pro-rata allotment was made to all the applicants. Excess application money received on application was adjusted towards sums due on allotment. All calls were made and were duly received except from Romi, who failed to pay allotment and first and final call money on 7,500 shares applied by her. These shares were forfeited. Afterwards, 40% of the forfeited shares were re-issued at Rs. 11 per share as fully paid-up.
   Pass necessary journal entries in the books of Krishna Ltd.   [6]

                                   OR

   KLM Ltd. is registered with an Authorised Capital of Rs. 2,00,000 divided into 2,000 shares of Rs. 100 each of which, 1,000 shares were offered for public subscription at a premium of Rs. 5 per share, payable as:

   On Application   -   Rs. 10 per share
   On Allotment   -   Rs. 25 per share (including premium)
   On First Call   -   Rs. 40 per share
   On Second and Final Call   -   Rs. 30 per share

   Applications were received for 1,800 shares, of which applications for 300 shares were rejected and the rest of the applications were allotted 1,000 shares on pro-rata basis. Excess application money was transferred to allotment.
   All the money was duly received except from Sridhar, holder of100 shares, who failed to pay allotment and first call money. His shares were later forfeited and Re-issued to Srikar at Rs. 60 per share, as Rs.70 paid-up. Second and Final call has not been made.
   Pass necessary Journal Entries and prepare Cash book in the books of KLM Ltd.

24. Sanjana and Alok were partners in a firm sharing profits and losses in the ratio 3 : 2. On 31st March, 2022 their balance Sheet was as follows:

Liabilities		Rs.	Assets		Rs.
Creditors		60,000	Cash		1,66,000
Workmen's Compensation fund		60,000	Debtors	1,46,000	
Capitals:			Less: Provision for		
Sanjana	5,00,000		Doubtful Debts	2,000	1,44,000
Alok	4,00,000	9,00,000	Stock		1,50,000
			Investments		2,60,000
			Furniture		3,00,000
		10,20,000			10,20,000

On 1st April, 2022 they admitted Nidhi as a new partner for 1/4th share in the profits on the following terms:
(a) Goodwill of the firm was valued at Rs. 4,00,000 and Nidhi brought the necessary amount in cash for her share of goodwill premium, half of which was withdrawn by the old partners.
(b) Stock was to be increased by 20% and furniture was to be reduced to 90%.
(c) Investments were to be valued at Rs. 3,00,000. Alok took over investments at this value.
(d) Nidhi brought Rs. 3,00,000 as her capital and the capitals of Sanjana and Alok were to be adjusted in the new profit sharing ratio.

Prepare Revaluation Account and Partners' Capital Accounts.   [6]

Mohan, Vinay and Nitya were partners in a firm sharing profits and losses in the proportion of 1/2, 1/3 and 1/6 respectively. On 31stMarch, 2022, their Balance Sheet was as follows:

Liabilities		Rs.	Assets		Rs.
Creditors		48,000	Cash at Bank		31,000
Employees' Provident fund		1,70,000	Bills Receivable		54,000
Contingency Reserve		30,000	Debtors	63,000	
Capitals:			Less: Provision for		
Mohan	1,20,000		Doubtful Debts	2,000	61,000
Vinay	1,00,000		Plant and Machinery		1,20,000
Nitya	90,000	3,10,000	Land and Building		2,92,000
		5,58,000			5,58,000

Mohan retired on the above date and it was agreed that:
(i) Plant and Machinery will be depreciated by 5%.
(ii) An old Computer previously written off was sold for Rs. 4,000.
(iii) Bad debts amounting to Rs. 3,000 will be written off and a provision of 5% on debtors for bad and doubtful debts will be maintained.
(iv) Goodwill of the firm was valued at Rs. 1,80,000.
(v) The capital of the new firm was to be fixed at Rs. 90,000 and necessary adjustments were to be made by bringing in or paying off cash, as the case may be.
(vi) Vinay and Nitya will share future profits in the ratio of 3 : 2.
     Prepare Revaluation Account and Partners' Capital Accounts.

25. Aditaya and Shekhar were partners in a firm sharing profits and losses in the ratio of 3 : 2. On 31st March, 2022, their Balance Sheet was as follows:

Liabilities		Rs.	Assets		Rs.
Creditors		90,000	Cash at Bank		20,000
Mrs. Aditya's Loan		30,000	Stock		24,000
Shekhar's Loan		30,000	Investments		30,000
General Reserve		45,000	Debtors	20,000	
Capital Accounts:			Less: Provision for		
Aditya	1,00,000		Doubtful Debts	2,000	18,000
Shekhar	97,000	1,97,000	Plant		1,00,000
			Advertisement Suspense Account		2,00,000

		3,92,000			3,92,000

The firm was dissolved on 31st March, 2022 on the following terms:
(i) Debtors realized Rs. 17,000 and Plant realized 10% more than the book value,
(ii) Aditya promised to pay Mrs. Aditya's Loan and took away Stock at Rs. 20,000.
(iii) Shekhar took away half of the Investments at a discount of 10%. Remaining Investments realized Rs. 4,500.
(iv) Creditors were paid off at a discount of 10%.
(v) Expenses of Realisation amounted to Rs. 7,000.
     Prepare Realisation Account.   [6]

26. (i) Naman Ltd. took over the business of Aman Enterprises on 1st April, 2020. The details of the agreement regarding assets and Liabilities to be taken over are:

Particulars	Book Value (Rs.)	Agreed Value(Rs.)
Building	20,00,000	35,00,000
Plant and Machinery	12,00,000	8,00,000
Stock	4,00,000	4,00,000
Trade Receivables	5,00,000	4,00,000
Creditors	2,00,000	3,00,000
Outstanding Expenses	50,000	1,00,000

It was decided to pay for purchase consideration as Rs. 7,00,000 through Cheque and balance by issue of 2,00,000 9% Debentures of Rs. 20 each at a premium of 25%.
Journalise the above.

(ii) On 1st April, 2019 Z Ltd. issued, 10,000, 8% Debentures of Rs. 100 each at a premium of 5%, to be redeemable at a premium of 10%, after 5 Years. The entire amount was payable on application. The issue was oversubscribed to the extent of 10,000 Debentures and the Allotment was made proportionately to all the applicants. The Securities Premium amount has not been utilised for any other purpose during the year. Give Journal entries for the issue of debentures and writing off loss on issue of debentures. [6]

PART – B
(Analysis of Financial Statements)

27. Which of the following is not an investing activity under cash flow statement?
    (a) Purchase of marketable securities for Rs. 25,000 for cash .
    (b) Sale of land for Rs. 28,000 for cash.
    (c) Sale of 2,500 shares (held as investment) for Rs. 15 each.
    (d) Purchase of equipment for Rs. 5,000 for cash. [1]

28. Current Ratio of a company is 2.4 : 1 and its Current Liabilities are Rs. 2,00,000. Subsequently, it sold goods costing Rs. 1,00,000 at a profit of 40%, half of which was on credit. Current Ratio will be ____
    (a) 3.1 : 1   (b) 2.4 : 1   (c) 2.6 : 1   (d) 2.5 : 1   [1]

OR

Calculate fixed assets from the following:
Share Capital Rs. 7,00,000; Reserves and Surplus Rs. 3,00,000; current assets Rs. 1,50,000; Proprietary Ratio 0.8 : 1.
    (a) Rs. 12,50,000   (b) Rs. 11,00,000   (c) Rs. 14,00,000   (d) Rs. 6,50,000

29. Which of the following is a tool of 'Analysis of Financial Statements'?
    (a) Statement of profit and loss   (b) Balance sheet
    (c) Ratio Analysis   (d) Both (a) and (b) above   [1]

OR

If the Operating Ratio of P Ltd. is 30%, its Operating Profit Ratio will be ____
    (a) 100%   (b) 30%   (c) 130%   (d) 70%

30. Which of the following is added back to net profit to calculate net cash flow from operating activities?
    (a) Interest Received   (b) Finance Cost
    (c) Rent Received   (d) Commission Received   [1]

31. The Current Ratio of Z Ltd. is 2 : 1. State giving reasons, which of the following transactions will improve, reduce or not change the Current Ratio:
    (i)   Payment to Creditors Rs. 20,000
    (ii) Purchased goods on Credit Rs. 80,000
    (iii) Cash received from Debtors Rs. 15,000   [3]

OR

Classify the following items under Major Heads and Sub-Heads (if any) in the Balance Sheet of the Company as per Schedule III, Part I of the Companies Act, 2013:
    (i)   Computer Software
    (ii) Work-in-Progress
    (iii) Bank Overdraft

32. Prepare a Comparative Statement of Profit and Loss for the year ended 31st March,2023 from the following: [3]

Particulars	2022 – '23 (Rs.)	2021 - 22 (Rs.)
Revenue From Operations	25,00,000	20,00,000
Employee Benefit Expenses	5,00,000	4,00,000
Other Expenses	2,50,000	2,00,000
Tax Rate	50%	50%

7

33. Cost of Revenue from Operations is Rs. 3,00,000; Inventory Turnover Ratio is 8 Times; Inventory in the beginning is 2 times more than the Inventory at the end. Calculate the values of Opening and Closing Inventories. [4]

OR

A company earns Gross Profit of 25% on Cost. For the year ended 31st March, 2023 its Gross Profit was Rs. 5,00,000. Equity Share Capital of the company was Rs. 10,00,000; Reserves and Surplus Rs. 2,00,000; Long-Term Loan Rs. 3,00,000 and Non -Current Assets were Rs. 10,00,000. Compute the 'Working Capital Turnover Ratio' of the company.

34. Read the following Hypothetical text and answer the questions given below on the basis of the same.
Adya, initiated her start-up "Cool Joint Ltd." in 2019, which is an organic juice extracting unit. Its profits are increasing year after year because of the increasing awareness towards health. Following information has been extracted from the Balance Sheet of "Cool Joint Ltd." for the year ended 31st March, 2022.

Particulars	31st March, 2022 Rs.	31st March, 2021 Rs.
Equity Share Capital	90,00,000	60,00,000
11% Debentures	30,00,000	50,00,000
Machinery (at cost)	28,00,000	20,00,000
Accumulated depreciation on Machinery	90,000	60,000

Additional Information:
(i)   During the year, a Machine costing Rs. 4,00,000 was sold at a gain of Rs. 30,000
(ii) Depreciation charged on Machinery during the year was Rs. 50,000.
(iii) Interest paid on 11% Debentures amounted to Rs. 5,50,000.
(iv) Dividend of Rs. 3,00,000 was paid on Equity Shares.
(v)   Debentures were redeemed at a premium of 10% on 31st March, 2022.
Calculate cash flows of "Cool Joint Ltd." from 'Investing Activities' and 'Financing Activities'. [6]

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII	Subject – Chemistry
Time – 3 Hours	Maximum Marks- 70

GENERAL INSTRUCTIONS:

Read the following instructions carefully and strictly follow them:
1. This question paper contains 33 questions. All questions are compulsory.
2. This question paper is divided into FIVE sections: A, B, C, D and E.
3. **In SECTIONA-Q.No.1to16,** are Multiple Type Questions, carrying 1 mark each.
4. In SECTION B- Q. No. 17 to 21, are very short answer questions carrying 2 marks each.
5. **In SECTIONC-Q. No. 22 to 28** are short answer questions carrying 3 marks each.
6. **In SECTION D** – Q. No. 29 and 30 are case based questions carrying 4 marks each.
7. **In SECTIONE-Q.No.**31 and 33 are long answer type questions carrying 5 marks each.
8. Use of log tables and calculators are not allowed.

SECTIONA

The Following Questions are multiple-choice questions, with one correct answer. Each question carries 1 mark.

1. An unripe mango placed in a concentrated salt solution to prepare pickle, shrivels because
   (a) It gains water due to osmosis
   (b) It loses water due to reverse osmosis
   (c) It gains water due to reverse osmosis
   (d) It loses water due to osmosis

2. The quantity of charge required to obtain one mole of aluminium from Al_2O_3 is
   (a) IF   (b) 6F   (c) 3F   (d) 2F

3. Which of the following statement is not correct about order of a reaction?
   (a) The order of a reaction can be a fractional number.
   (b) Order of a reaction is experimentally determined quantity.
   (c) The order of a reaction is always equal to the sum of the stoichiometric coefficients of reactants in the balanced chemical equation for a reaction.
   (d) The order of a reaction is the sum of the powers of molar concentration of the reactants in the rate law expression.

4. In which of the following pairs both the ions are coloured in aqueous solution ?
   (a) Sc^{3+} , Ti
   (b) Sc^{3+} , Co^{2+}
   (c) Ni^{2+} , Cu^+
   (d) Ni^{2+} , Ti^{3+}

5. The CFSE for octahedral $[CoCl_6]^{4-}$ is 18,000 cm^{-1}. The CFSE for tetrahedral $[CoCl_4]^{2-}$ will be
   (a) 18,000 cm^{-1}
   (b) 16,000 cm^{-1}
   (c) 8,000 cm^{-1}
   (d) 20,000 cm^{-1}

6. Which of the following species is not expected to be a ligand?
   (a) NO
   (b) NH_4^+
   (c) $NH_2CH_2CH_2NH_2$
   (d) CO

7. Molecules whose mirror image is non-superimposable over them are knownas chiral. Which of the following molecules is chiral?
   (a) 2-Bromobutane
   (b) 1-Bromobutane
   (c) 2-Bromopropane
   (d) 2-Bromopropan-2-ol

8. Determine the product formed when 3- Bromo -2, 2- dimethylbutane reacts with ethanol at high temperature :
   (a) 2, 3 – Dimethyl but 2- ene
   (b) 3, 3-Dimethyl but -1-ene
   (c) 3-Ethoxy -2, 3-dimethyl butane
   (d) 3 - Ethoxy – 2,2- di methyl butane

9. In Clemmensen Reduction carbonyl compound is treated with _____.
   (a) Zinc amalgam + HCl
   (b) Sodium amalgam + HCl
   (c) Zinc amalgam + nitric acid
   (d) Sodium amalgam + HNO_3

10. The correct order of increasing acidic strength is _____.
    (a) Phenol < Ethanol < Chloroacetic acid < Acetic acid
    (b) Ethanol < Phenol < Chloroacetic acid < Acetic acid
    (c) Ethanol < Phenol < Acetic acid < Chloroacetic acid
    (d) Chloroacetic acid < Acetic acid < Phenol < Ethanol

11. Methylamine reacts with HNO_2 to form _____.
    (a) $CH_3-O-N=O$
    (b) CH_3-O-CH_3
    (c) CH_3OH
    (d) CH_3CHO

12. Which of the following methods of preparation of amines will not give the same number of carbon atoms in the chain of amines as in the reactant?
    (a) The reaction of nitrite with $LiAlH_4$.
    (b) The reaction of the amide with $LiAlH_4$ followed by treatment with water.
    (c) Heating alkyl halide with potassium salt of phthalimide followed by hydrolysis.
    (d) Treatment of amide with bromine in the aqueous solution of sodium hydroxide.

Direction : For (question numbers 13 to 16)in the following questions as Assertion (A), is followed by a corresponding Reason (R).Select the correct answer to these questions from the codes (A), (B), (C) and (D) as given below:

A) Both Assertion & Reason are true and Reason is correct explanation of Assertion.
B) Both Assertion and Reason are true, but Reason is not the correct explanation of the Assertion.
C) Assertion is true, but Reason is false.
D) Assertion is false, but Reason is true.

13. **Assertion (A):** Order of the reaction can be zero or fractional.
    Reason (R): We cannot determine order of reaction from balanced chemical equation.

14. **Assertion (A):** Sc^{3+} is a coloured ion.
    Reason (R): Colour of d block elements is due to d d transition.

15. **Assertion (A):** In monohaloarenes, further electrophilic substitution occurs at ortho and para positions.
    Reason (R): Halogen is a ring deactivator .

16. **Assertion (A):** Gabriel phthalimide reaction is used to prepare all amines whether it is primary or secondary or tertiary.
    Reason (R): Aromatic primary amines cannot be prepared by this reaction.

SECTIONB

17. Why are aquatic species more comfortable in cold water in comparison to warm water?

18. A reaction is of second order with respect to a reactant. How is the rate of reaction affected if the concentration of the reactant is reduced to half? What is the unit of rate constant for such a reaction?

19. When a co-ordination compound $CrCl_3.6H_2O$ is mixed with $AgNO_3$, 2 moles of AgCl are precipitated per mole of the compound. Write
    (i) Structural formula of the complex.
    (ii) IUPAC name of the complex

    OR

    Explain $[Co(NH_3)_6]^{3+}$ is an inner orbital complex, whereas $[Ni(NH_3)_6]^{2+}$ is an outer orbital complex.

20. Write the equation for the following reactions :
    (i) Propan-2-one be converted into tert-butyl alcohol.
    (ii) Conversion of phenol to aspirin

21. (i) Distinguish between the following compounds by suitable chemical test :
       Acetophenone and Benzophenone
    (ii) Write the chemical reaction for Hell-Volhard Zelinsky reaction

SECTION: C

22. (i) The molar conductance of an electrolyte reaches to the maximum value at infinite dilution, Why ?
    (ii) Calculate the λ_m^0 for Cl^- ion from the data given below :
       Λ_m^0 ($MgCl_2$) =258.6 Scm^2mol^{-1}
       $\lambda_m^0 Mg^{2+}$ = 106 $Scm^2\ mol^{-1}$ [1+2]

3

23. For a general reaction A $\longrightarrow$ B, the plot of concentration of A vs time is given in Fig. Answer the following question on the basis of graph.
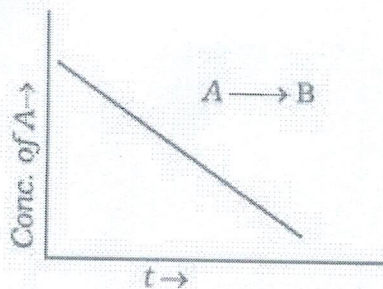
(a) What is the order of the reaction ?

(b) What is the slope of the curve?

(c) What is the unit of the rate constant?

OR

Derive integrated rate equation for rate constant of a first order reaction

24. (i) What type of isomerism is shown by the complex $[Cr(H_2O)_6]Cl_3$?

(ii) On the basis of crystal field theory, write the electronic configuration for d^4 ion if $\Delta_0 > P$.

(iii) Write the hybridization and shape of $[CoF_6]^{3-}$.

(Atomic number of Co = 27)

25. Account for the following :

(a) The dipole moment of chlorobenzene is lower than that of cyclohexyl chloride.

(b) Alkyl halides though polar are immiscible with water.

(c) Grignard's reagents should be prepared under anhydrous conditions

26. (i) Arrange the following in the decreasing order of their basic strength in aqueous solutions:

CH_3NH_2, $(CH_3)_2 NH$, $(CH_3)_3N$ and NH_3

(ii) Convert Aniline into p- Nitroaniline

(iii) Write the reaction involved in Gabriel Phthalimide reaction

27. (i) Write Reimer-Timann reaction.

(ii) Write the mechanism of acid dehydration of ethanol to yield ethene

28. (i) How are nucleosides different from nucleotides?

(ii) How do you explain the presence of all the six carbon atoms in glucose in a straight chain?

SECTION: D

The following questions are case – based questions. Each question has an internal choice & carries 4 (2+1+1) marks each. Read the passage carefully and answer the questions, that follows:

29. A soluble solid in solution has the effect of raising its boiling point and depressing its freezing point. The addition of non-volatile substances to a solvent decreases the vapour pressure and the added solute particles affects the formation of pure solvent crystals. According to many researches the decrease in freezing point directly correlated to the concentration of solutes dissolved in the solvent. This phenomenon is expressed as freezing point depression and it is useful for several applications such as freeze concentration of liquid food and to find the molar mass of an unknown solute in the solution. Freeze concentration is a high quality liquid food concentration method where water is removed by forming ice crystals. This is done by cooling the liquid food below the freezing point of the solution

4

Answer the following questions :

(a) What mass of NaCl must be dissolved in 65.0 g of water to lower the freezing point of water by 7.5°C? The freezing point depression constant (K_f) for water is 1.86°C/m. Assume van't Hoff factor for NaCl is 1.87. (Molar mass of NaCl = 58.5 g)

(b) Why do gases nearly always tend to be less soluble in liquids as the temperature is raised?

OR

Some liquids on mixing form 'azeotropes'. What are 'azeotropes'?

(c) Explain why on the addition of 1 mol of NaCl to 1 litre of water, the boiling point of water increases, while the addition of 1 mol of methyl alcohol to one litre of water decreases its boiling point.

30. Carbohydrates are primarily produced by plants and form a very large group of naturally occurring organic compounds. Some common examples of carbohydrates are cane sugar, glucose, starch, etc.A large number of their reactions have shown that they contain specific functional groups. Chemically, the carbohydrates may be defined as optically active polyhydroxy aldehydes or ketones or the compounds which produce such units on hydrolysis. Some of the carbohydrates, which are sweet in taste, are also called sugars. The most common sugar, used in our homes is named as sucrose whereas the sugar present in milk is known as lactose. Carbohydrates are also called saccharides.

Answer the following questions:

(a) Write down the structures and names of the products formed when D-glucose is treated with

 (i) Hydroxylamine
 (ii) Acetic anhydride

(b) What are the products of hydrolysis of maltose?

OR

What do you understand by the term glycosidic linkage?

(c) Name two components of starch.

SECTION: E

31. (a) What type of a cell is the lead storage battery? Write the anode and the cathode reactions and the overall reaction occurring in a lead storage battery while operating.

(b) A voltaic cell is set up at 25 °C with the half-cells, Al | Al^{3+} (0.001 M) and Ni | Ni^{2+} (0.50 M). Write the equation for the reaction that occurs when the cell generates an electric current and determine the cell potential.
(Given : $E^0_{Ni^{2+}/Ni}$ =−0.25V, $E^0_{Al^{3+}/Al}$ =−1.66V)

[2+3]

OR

(a) Predict the products of electrolysis in each of the following:
 (i) An aqueous solution of $AgNO_3$ with platinum electrodes.
 (ii) An aqueous solution of H_2SO_4 with platinum electrodes.
(b) Estimate the minimum potential difference needed to reduce Al_2O_3 at 500°C. The Gibbs energy change for the decomposition reaction $2/3\ Al_2O_3 \rightarrow 4/3\ Al + O_2$ is 960 kJ
(F = 96500 C mol⁻¹)

[2+3=5]

32. Answer the following:

(a) Complete the following chemical reaction equations :

    (i) $Fe^{2+}(aq) + MnO_4^-(aq) + H^+(aq) \rightarrow$

    (ii) $Cr_2O_7^{2-}(aq) + I^-(aq) + H^+(aq) \rightarrow$
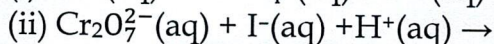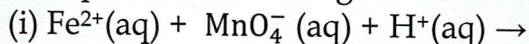
(b) Explain the following observations :

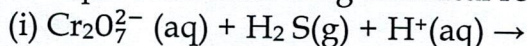   (i) Transition elements are known to form many interstitial compounds.

    (ii) With the same d-orbital configuration (d^4), Cr^{2+} ion is reducing while Mn^{3+} ion is oxidizing.

    (iii) The enthalpies of atomization of the transition elements are quite high.

<div align="center">OR</div>

Answer the following:

(a) Complete the following chemical reaction equations :

    (i) $Cr_2O_7^{2-}(aq) + H_2S(g) + H^+(aq) \rightarrow$

    (ii) $MnO_2(s) + KOH(aq) + O_2 \rightarrow$

(b) Explain the following observations :

    (i) Transition metals form compounds which are usually coloured.

    (ii) Transition metals exhibit variable oxidation states.

    (iii) The actinoids exhibit a greater range of oxidation states than the lanthanoids

33. (a) An aromatic compound "A' (Molecular formula C_8H_8O) gives a positive 2, 4-DNP test. It gives a yellow precipitate of compound 'B' on treatment with iodine and sodium hydroxide solution. Compound A' does not give Tollen's or Fehling's test. On severe oxidation with potassium permanganate forms a carboxylic acid 'C' (Molecular formula $C_7H_6O_2$), which is also formed along with the yellow compound in the above reaction. Identify A, B and C and write all the reactions involved.

(b) Write the product(s) in the following:

    (i) $2CH_3CHO \xrightarrow{\text{dil NaOH}} ?$

    (ii) $\xrightarrow[\text{Conc.HCl}]{\text{Zn-Hg}} ?$
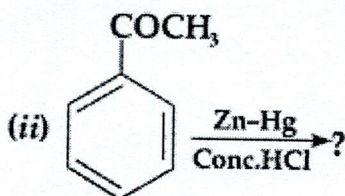
<div align="center">OR</div>

(a) An alkene 'A' (Mol. formula C_5H_{10}) on ozonolysis gives a mixture of two compounds, 'B' and 'C'. Compound B' gives positive Fehling's test and forms iodoform on treatment with I_2 and NaOH. Compound C' does not give Fehling's test but forms iodoform. Identify the compounds A, B, and C. Write the reaction for ozonolysis and formation of iodoform from B and C.

<div align="right">[3+2]</div>

(b) Write structures of A, B, C and D in the following reaction sequence :
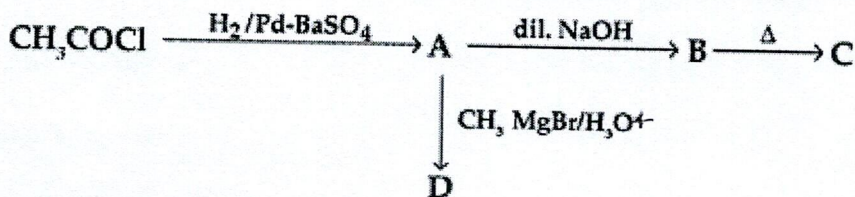
$CH_3COCl \xrightarrow{H_2/Pd-BaSO_4} A \xrightarrow{\text{dil. NaOH}} B \xrightarrow{\Delta} C$

                   $\downarrow CH_3 MgBr/H_3O^+$

                   D

<div align="center">6</div>

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII   Subject – English (Core)
Time – 3 Hours   Maximum Marks- 80

GENERAL INSTRUCTIONS:

Read the following instructions very carefully and strictly follow them :

1. This question paper has 13 questions. All questions are compulsory.
2. This question paper contains THREE sections-**Sections A: *READING SKILLS*, Section B: *CREATIVE WRITING SKILLS* and Section C: *LITERATURE.***
3. Attempt all questions based on specific instructions for each part. Write the correct question number and part thereof in your answer sheet.
4. Separate instructions are given with each question/part, wherever necessary.
5. Adhere to the prescribed word limit while answering the questions.

SECTION - A   (22 Marks)
(Reading Skills)

1. Read the passage given below.   (12 Marks)

1. New Year is a holiday celebration that includes New Year's Eve and lasts through New Year's Day. New Year's celebrations have been around for a long time in one form or another. They can be traced all the way back to the Babylonians at around 2,000 B.C. New Year's Day was not always celebrated on January 1st as it is today. Earlier, the New Year was celebrated in the spring, as new life began to emerge in the world.

2. This tradition is quite sensible in relation to the seasons, however ancient cultures struggled to create a calendar that could retain alignment with the sun. The Romans went through several versions of calendars in which they inevitably changed the first day of the year to January first. Their final change to the calendar was made by Julius Caesar in the year 46 B.C. (the Julian calendar). Caesar also adopted January 1st as the first day of the year. The Julian calendar became the basis for our current calendar, so New Year's Day is found at the top of the calendar on January.

3. Certain Roman traditions of the New Year have remained in same form to this day. Among the many Roman gods was Janus, a two-headed God. Janus was considered the God of beginnings and endings, and the guardian of gates and doors. One of the heads of Janus faced forward and the other looked back. This figure was a symbol of good beginnings and endings to the Romans. One head was able to look backward to reflect upon what had passed, while the other could look forward to what was coming. The word 'Janus' is closely related to the word January.

4. The Romans considered the significance of Janus when they established their calendar, and named the first month after him. This Roman belief has continued on, in tradition to this day. In many ways, the modern celebration of New Year's Day carries on ancient traditions. The holiday itself is celebrated from New Year's Eve (in the old year) and continued on through New Year's Day.

5. By observing the holiday in this manner, we are encouraged to look at the previous year as it passes away and to welcome the new one with renewed enthusiasm and desire to improve ourselves. New Year's Day has traditionally been a day to enjoy happiness that will hopefully endure throughout the year. With the old year gone, and the New Year just beginning, it is a great time to fulfil another New Year's tradition to make resolutions.

6. On New Year's Day, people begin to work at goals that will improve their circumstances. Some people achieve their New Year's resolutions, while others lose sight of them over time. Here are a few ideas for making resolutions and a few ideas on how to achieve them.

7. It is good to set personal goals, but it can also be beneficial to set goals as a family. Sit down as a family and discuss a few ideas that you would like to achieve together. Working on goals as a family can be fun and rewarding. An additional benefit of working on goals as a family is that it gives you a support system that can make it easier to succeed. Set only a few goals, that are easy to remember and can be accomplished - reasonably and realistically.

8. Making too many goals can complicate your efforts and make you lose sight of many of them altogether. It is amazing how the rush of life can quickly overtake the genuinely good intentions of worthy goals. When goals are not written down, they can be easily forgotten. Write your goals down and post them somewhere where you will see them regularly. When your goals are written and clearly visible, you will be more likely to remember them and to follow good habits that lead to success.

9. Choose at least one resolution that will make you happy now. Many of the goals people choose are ones that lead to greater stress, discomfort, or displeasure, at least for the short term. A few examples are dieting, getting a better job, and quitting a bad habit like smoking. These are worthy goals, but they frequently cause greater stress while trying to achieve them.

10. In addition to these kinds of goals, choose a goal that increases your happiness such as taking an hour to relax each day, starting a new hobby, or spending time daily with the kids. The celebration of New Year's Day is all about putting the past behind and looking forward to new and exciting things to come. Although Roman civilization passed from existence long ago, its traditions continue to influence the way New Year's Day is celebrated today.

Answer the following questions, based on the given passage:

(i) Choose the most appropriate option.   (1)
   The holiday celebration of New Year's Day is
   (A) since the time of the Babylonians, although not on New Year's Day of the present time
   (B) since the time of 2000 BC and always on New Year's Day
   (C) since the time of 2000 BC, under the Babylonians, although not on 1st January as it is currently
   (D) on Babylonian New Year's Day since 2000 BC although not on a fixed January day

(ii) With which statement given below would the readers of the passage agree? **(1)**
    (A) The rush of life can easily overtake the good intentions behind the goals we have set.
    (B) The writing down of one's goals can overtake good intentions.
    (C) Good intentions about goals are remembered when we follow good habits.
    (D) Good habits are the goals that are set when we write them down.

(iii) What is the general consensus of opinion about New Year's Day? **(2)**

(iv) Complete the sentence appropriately. **(1)**
    The celebration of New Year's Day is all about _____

(v) Select the antonym for the word 'traditionally'. **(1)**
    (A) divisionally
    (B) divergently
    (C) divisively
    (D) deferentially

(vi) Based on your understanding of the text, what are the various advantages of setting goals as a family? **(1)**

(vii) List two reasons behind the continuity of Roman traditions with regard to the New Year. **(2)**

(viii) Mention how the making of too many resolutions is a drawback rather than a benefit. **(2)**

(ix) Read the five titles (a) - (e) given below : **(1)**
    (a) Need for a Judicious Selection of Goals, on New Year's Day
    (b) Judicious Selection of New Year Goals-a Must
    (c) Judiciary's Selection of New Year Goals
    (d) New Year Goals and Judicious Selection are Inseparable Twins
    (e) New Year Goals-not fixed

    Identify the option that displays the title/titles corresponding with the passage
    (A) (a) and (b)
    (B) (c) and (d)
    (C) only (b)
    (D) (d) and(e)

2. Read the passage given below: **(10 Marks)**

1. Educational technology is the combined use of computer hardware, software, educational theory, and practice to facilitate learning. When referred to with its abbreviation EdTech, it points to the industry of companies that create educational technology. With education growing online, India's Edtech market size is expected to grow 37 times in the next five years.

2. Education in both rural and urban India is expected to be supported by technology in the near future.

3. As per a 2019-2020 report, only 22.3 percent of schools had an internet connection. Moreover, 61 percent of schools in the country didn't even have computers.

4. With the internet rate estimated to reach above 55 percent by the end of 2025 in India, digitisation of education will impact the country's development and become one of the topmost priorities for the government.

5. Budget 2021-22 allocated Rs.93,224.31 crore to the Ministry of Education. It was an increase of over Rs.8,100 crore from the revised estimates for the current fiscal year and the Department of Higher Education was allocated Rs.38,350.65 crore.

6. The role of technology in education is more critical now than ever in addressing educational disparity. It has already made learning affordable and accessible. In particular, the use of technology in education in rural India is one of the biggest boons of recent times. With help from apps and softwares, teachers can enhance their teaching ability and provide information about the most recent developments. Students can enjoy an interactive learning experience. Teachers can employ animation, powerpoint slides and graphs to catch the interest of their pupils. Gamification lends interest in the subject.

7. The online education system is a sector in which growth and development will work for the betterment of many sectors which include educating learners and increasing job opportunities for educators and technical teams.

Use of Technology in Education
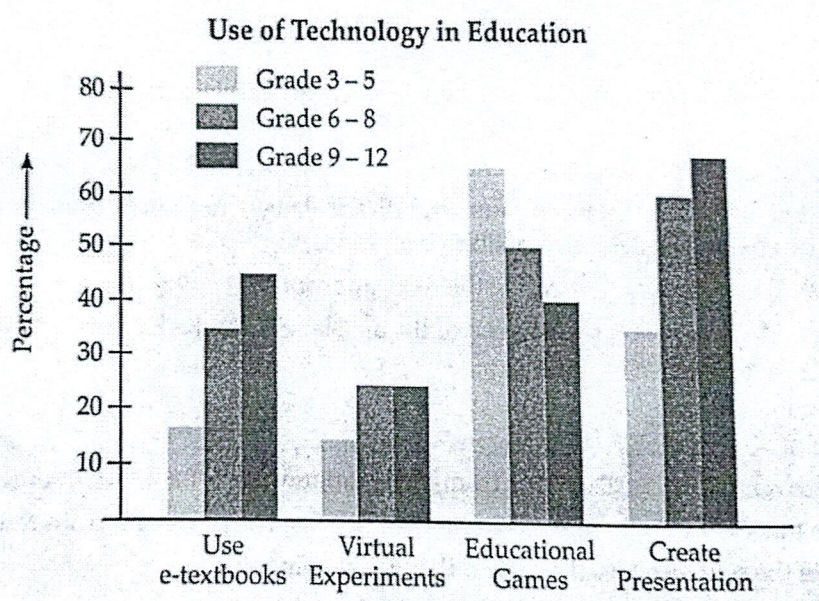
Table: Reasons For Boom In Edtech

| 1. Lower cost involved in the dissemination of online education |
| 2. Convenient, flexible and affordable |
| 3. Initiatives by the Government which include programmes like SWAYAM and DIKSHA |
| 4. Increasing number of education-based startups |
| 5. Increase in the internet user base |
| 6. Increasing penetration of mobile devices |
| 7. inflow of investment and acquisition in this sector |
| 8. It overcomes the geographical barriers |

Answer the following questions, based on the given passage:

(i) Does the following statement agree with the information given in para 1? **(1)**
Education technology is the practice of introducing information and communication technology tools into the classroom.

Select from the following:
True If the statement agrees with the information
False If the statement contradicts the information
Not Given - If there is no information on this

(ii) What are the two essentials for digitisation of education? **(1)**

(iii) Select the option which displays that use of technology in education in rural India is one of the biggest boons of recent times. **(1)**
(A) Frees up the teacher to be able to concentrate on farming.
(B) Teachers can enhance their teaching ability and provide more value to the students.
(C) It understands what is needed and technology is subsequently developed effectively.
(D) Simplifies assignment management with user-friendly methods.

(iv) Give two reasons why Edtech is more critical now. **(1)**

(v) The word 'critical' in para 6 most nearly means **(1)**
(A) difficult
(B) crucial
(C) complementary
(D) causative

(vi) Complete the given sentence by selecting the most appropriate option: **(1)**
Technology in education works for the betterment of many sectors such as
(A) farmers, educators and businessmen
(B) educating learners, job opportunities for educators and technical teams
(C) doctors, engineers and technocrats
(D) banking, construction workers and software technicians

(vii) What does the author predict about the online education system? Answer in 40 - 50 words. **(2)**

(viii) Based on the graph, state the items which have the highest percentage of technology used by students of grades 9-12 and by students of grades 3-5. **(2)**

SECTION - B
(CREATIVE WRITING SKILLS) (18 Marks)

3. **Attempt ANY ONE of the two, in about 50 words :** **(4)**

(a) Your school is introducing a five-week certified module on Graphic Design during the summer vacation. Draft a notice, asking interested students to register for the same latest by 20th December 2024. Mention relevant details like fee, timings and course coverage. You are Nishi/Nishant, the Academic In-charge of APJ School, Tis Hazari, Delhi.

OR

(b) You are Ritesh/Rekha, Secretary of BI, Residents Welfare Society, Anandpur, Delhi. Draft a notice requesting the members to attend a meeting of the society to discuss the problem of security in your colony.

4. Attempt ANY ONE of the two in about 50 words : (4)

(a) You are Priyanka/Piyush. Mr. and Mrs. Kapoor invited you to the marriage ceremony of their daughter, Sanaa, on 27th June 2022 at 7:00 PM at their residence, Press Nagar, Indore. Draft a formal reply accepting the invitation.

OR

(b) You are Amit/Amita. You are planning a weekend trek to Kalighat. Write an informal letter of invitation to your friend inviting him/her to join you. Mention day, date, time and any other relevant information.

5. Attempt ANY ONE of the two, in 120- 150 words : (5)

(a) You are Prakriti/Prabhat, a resident of College Road, Bhopal. You see the following advertisement in the newspaper, for the job of a 'Marketing Officer' in Chaitanya Enterprises, Mumbai. Write an application with detailed bio-data to the Public Relations Officer of the firm.

SITUATION VACANT

Chaitanya Enterprises requires an experienced Marketing Officer for its Mumbai branch.
The applicant must have
  1 Graduation in Marketing
  2. 6+ years experience
  3. Additional skills
  4. Effective written and communication skills
  5. Thorough understanding of marketing techniques and principles
  6. Knowledge of MS Office, social media and web analytics
Apply to Sunil Baweja, Public Relations Officer

OR

(b) Write a letter to the Editor of 'The Telegraph' highlighting the difficulties faced by people due to suspension of internet services in Jharkhand for 6 hours on Saturday and Sunday to prevent unfair practices during the Combined Graduate Level Examination conducted by the Jharkhand Staff Selection Commission.

6. Attempt ANY ONE of the two questions in 120- 150 words : (5)

(a) **MICROSOFT TECHIE DRIVES AUTO- RICKSHAW: A 35 - YEAR' S MANTRA TO 'DRIVE AWAY ' LONELINESS**

Recently, a Microsoft software engineer was seen driving Namma Yatri Auto every weekend in Koramangala, Bangalore wearing his Microsoft hoodie to combat loneliness.
Write whether success can be measured in terms of achieving a prestigious position at a leading company after graduating from a premier institute or in living a peaceful, fulfilling life in your own way with good mental health and emotional stability.

OR

(b) **JHARKHAND CM HEMANT SOREN INAUGURATES KANTATOLI FLYOVER IN RANCHI**

"Today is a historic day for the people of Jharkhand, including Ranchi, announced Jharkhand Chief Minister Hemant Soren on October 05, 2024.
Write a report as a Staff Reporter of Prabhat Khabar. You are Priya / Piyush.

LITERATURE
(TEXT BOOK AND SUPPLEMENTARY READING TEXT)   (40 Marks)
7. Attempt ANY ONE of the extracts given below and answer the questions that follow :

(6x1 = 6)

(a) "What I want should not be

confused

with total inactivity.

Life is what it is about;

I want no truck with death.

If we were not so single-minded

about keeping our lives moving,

and for once could do nothing,

perhaps a huge silence

might interrupt this sadness
of never understanding ourselves
and of threatening ourselves with
death."

(i) The tone of the poet in the expression "perhaps a huge silence might interrupt this
   sadness" is:
   (A) unsure yet optimistic
   (B) sure and confident
   (C) poetic and melodramatic
   (D) hopeful but not confident

(ii) "What I want should not be confused with total inactivity."
    Choose the option that draws the most accurate parallel.
    keeping quiet: _____ :: total inactivity : _____
    (A) reflection and death
    (B) silence and chaos
    (C) stagnation and introspection
    (D) mindfulness and fearless

(iii) Select the option that aptly describes the tone of the poet in the expression
     "If we were not so single minded..." is
    (A) regretful
    (B) critical
    (C) encouraging
    (D) Friendly

(iv) What do you think is the mood of the poet in the above extract
    (A) gloomy ,cynical
    (B) reflective, inspired
    (C) introspective, aware
    (D) critical, demotivated

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(v) Pick the option that DOES NOT complete the given sentence suitably, as per the extract.

Threatening ourselves with death
(A) feeds on the fear of death.
(B) challenges finiteness of life.
(C) keeps us rushing through life.
(D) makes us restless and impatient.

(vi) Identify the poetic device used in the last four lines of the stanza
(A) Alliteration
(B) Repetition
(C) Enjambment
(D) Consonance

OR

(b) "Therefore, on every morrow, are we wreathing

A flowery band to bind us to the earth,

Spite of despondence, of the inhuman dearth

Of noble natures, of the gloomy days,

Of all the unhealthy and o'er darkened ways

Made for our searching yes, in spite of all,

Some shape of beauty moves away the pall

From our dark spirits."

(i) In which of the following options can the highlighted words be replaced with 'despondence?
(A) The man paced about the mom showing **restlessness**
(B) A chat with a close friend can take away our **blues**
(C) I was in **jitters**, seeing the boy trapped in the trench
(D) Being **dogged** is what led him to negotiate the challenges

(ii) Which line from the extract reflects the idea behind 'evil ways to deceive others'?

(iii) Pick the option that enumerates what 'noble natures' would include
(a) selflessness
(b) sensitivity
(c) enthusiasm
(d) aggression
(e) meticulousness
(f) judiciousness
(A) a , d and e
(B) b, c and f
(C) b, d and e
(D) a, b and f

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(iv) Based on the poem, choose the correct option with reference to the two statements given below

Statement 1: The earth without the beautiful things is a place full of despair and unpleasantness.

Statement 2: The ornate bond created by human beings, ushers hope in their lives.

(a) Statement 1 is true but Statement 2 is false.
(b) Statement 1 is false but Statement 2 is true.
(c) Both Statement 1 and Statement 2 can be inferred.
(d) Both Statement 1 and Statement 2 cannot be Inferred.

(v) Complete the analogy. Do not repeat from used example.

Flowery band : metaphor: _____ alliteration

(vi) Is the given statement **TRUE or FALSE**, with reference to the given extract ?

Reflection upon our own mortality and the fleeting nature of human happiness are contributing factors towards things of natural beauty.

8. **Attempt ANY ONE of the extracts given below and answer the questions that follow: (4X1=4)**

(a) I have come forward to tell you why he came to be known as Tiger King. I have no intention of pretending to advance only to end in a strategic withdrawal. Even the threat of a Stuka bomber will not throw me off track. The Stuka, if it likes, can beat a hasty retreat from my story. Right at the start, it is imperative to disclose a matter of vital importance about the Tiger King. Everyone who reads of him will experience the natural desire to meet a man of his indomitable courage face -to - face. But there is no chance of its fulfilment. As Bharata said to Rama about Dasaratha, the Tiger King has reached that final abode of all living creatures. In other words, the Tiger King is dead.

(i) Explain : "Even the threat of a Stuka bomber will not throw me off track "

(ii) What is strategic withdrawal?
    (A) to withdraw oneself from one's responsibility
    (B) to withdraw oneself from a situation in order to survive
    (C) to withdraw oneself in a very tricky manner
    (D) to withdraw oneself when most needed

(iii) 'I have come forward to tell you why he came to be known as Tiger King. This means that _____

(iv) What is the analogy between the Tiger King and King Dasaratha?

OR

(b) DERRY: What do you do all day?

MR LAMB: Sit in the sun. Read books. Ah, you thought it was an empty house, but inside, it's full. Books and other things. Full.

DERRY: But there aren't any curtains at the windows.

MR LAMB: I'm not fond of curtains. Shutting things out, shutting things in. I like the light and the darkness, and the windows open, to hear the wind.

DERRY: Yes. I like that. When it's raining, I like to hear it on the roof.

MR LAMB: So you're not lost, are you? Not altogether? You do hear things. You listen.

DERRY: They talk about me. Downstairs, When I'm not there.

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(i) According to Mr. Lamb, what does the idea of being 'lost signify?
(A) He who does not hear what other people say is lost.
(B) He who does not appreciate man and nature is lost.
(C) He who does not pause to reflect on wind and rain is lost.
(D) He who is closed off to nature and its wonders is lost.

(ii) Read the following analysis of Mr. Lambs character based on the given extract. Choose the option that fills in the given blanks most appropriately:

Mr. Lamb's (1) ....and daily activities reflected the values he lived by and the kind of person he was. His openness , inquisitiveness, and his (2) ....to nature were embodied in his work and words. Being close to and experiencing(3) ....was not only significant to him, but was at the heart of finding meaning and (4) ...... in life.
(A) (1) preferences; (2) attunement; (3) nature; (4) direction
(B) (1) choices; (2) loyalty; (3) the world; (4) hope
(C) (1) words; (2) attitude; (3) gardening; (4) worthiness
(D) (1) sermons; (2) proximity; (3) life; (4) values

(iii) Choose the option that best describes the sequence of Derry's emotions in the above extract:
(A) shyness - friendliness-reluctant acceptance
(B) inquisitiveness - nostalgia-mild sadness
(C) curiosity - measured delight- disappointment
(D) defiance - excitement-grouchy insecurity

(iv) "You do hear things. You listen". Choose the option that captures the difference between hearing and listening.

hear : listen :: _____:_____
(A) shut in: shut out
(B) smile: laugh
(C) act: reflect
(D) attend: participate

9. **Attempt ANY ONE of the extracts given below and answer the questions that follow:**

(6X1 = 6)

(a) . ....it was a big and confusing forest which he had gotten into. He tried, to be sure to walk in a definite direction, but the paths twisted back and forth so strangely! He walked and walked without coming to the end of the wood, and finally he realised that he had only been walking around in the same part of the forest. All at once he recalled his thoughts about the world and the rattrap. Now his own turn had come. He had let himself be fooled by a bait and had been caught. The whole forest, with its trunks and branches, its thickets and fallen logs, closed in upon him like an impenetrable prison from which he could never escape.

(i) How would you characterise the mood of the above extract?
(A) mysterious, restful
(B) ominous, despairing
(C) thoughtful, whimsical
(D) philosophical, anguished

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(ii) By what bait had the peddler been fooled?
   (A) He had chosen to take the 'safe' forest route.
   (B) He had decided to avoid the public highway.
   (C) He had stolen money from the trusting crofter.
   (D) He didn't realise the power of his rattrap analogy.

(iii) The consequence of his own turn having come was that the peddler had:
   (A) got irreversibly lost in the thick, warped forest.
   (B) been fooled and imprisoned in a hopeless prison.
   (C) been walking around the same part of the forest.
   (D) walked the whole forest without finding the end.

(iv) The above extract richly employs literary devices. Look at the table below. Choose the option that correctly matches the instances/examples in Column A with the literary devices in Column B.

Column A	Column B
(1) The forest closed in upon the peddler like an impenetrable prison.	(a) Imagery
(2) The big and confusing forest with its twisted paths, trunks, branches, thickets and fallen logs.	(b) Allegory
(3) The lost peddler was reminded of the world and the rattrap.	(c) Metaphor
(4) It was a big and confusing forest which he had gotten into. The peddler had been fooled and was trapped in the forest.	(d) Simile

   (A) 1-a, 2-b, 3-c, 4-d
   (B) 1-d, 2-a, 3-b, 4-c
   (C) 1-c, 2-d, 3-a, 4-b
   (D) 1-b, 2-c, 3-d, 4-a

(v) Which word from the following does not mean the same as 'impenetrable'?
   (A) Impassable
   (B) Overgrown
   (C) Dense
   (D) Permeable

(vi) In 'The Rattrap', which of these did the peddler think were his rattraps?
   (a) the entire forest
   (b) the crofter's profitable cow
   (c) the crofter's hanging wallet
   (d) the ironmaster's offer of food and lodging
   (e) the ironmaster's daughter's kindness and acceptance
   (A) (a) and (b)
   (B) (c) and (d)
   (C) (a), (c) and (e)
   (D) (b) , (c) and (d)

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(b) On Saturday they made their weekly pilgrimage to watch United. Sophie and her father and little Derek went down near the goal-Geoff, as always, went with his mates higher up. United won two-nil and Casey drove in the second goal, a blend of innocence and Irish genius, going around the two big defenders on the edge of the penalty area with her father screaming for him to pass, and beating the hesitant goalkeeper from a dozen yards. Sophie glowed with pride. Afterwards Geoff was ecstatic.

(i) Complete the given statement.

   Their visit to the match was like a 'weekly pilgrimage' refers to ....

(ii) Based on the following statements, choose the correct option
   Statement I: "Geoff, as always, went with his mates higher up."
   Statement II: Geoff was rude and indifferent towards everyone around him and didn't care about anyone at all.
   (A) Statement I and Statement II both can be inferred.
   (B) Statement I can be inferred but Statement II cannot be inferred.
   (C) Statement I cannot be inferred but Statement II can be inferred.
   (D) Statement I and Statement II both cannot be inferred.

(iii) "Sophie glowed with pride". What was the reason of her 'pride'?

(iv) Choose the option listing the situation I which one word would be ' ecstatic '

Scenario 1	Scenario 2	Scenario 3	Scenario 4
Going to an old age home and listening to them share stories from the past	Being seated next to your favourite pop singer during a short flight	Going to a dog show and losing your pet there.	Coming home and finding that there are 11 messages from your Principal in your email inbox.

   (A) Scenario 1
   (B) Scenario 2
   (C) Scenario 3
   (D) Scenario 4

(v) Who was 'a blend of innocence and Irish genius'?

(vi) "Beating the goal keeper from a hundred yards". Who did this and why?
   (A) Danny did this to score his goal.
   (B) Sophie's father did this when the goal keeper was trying to block Danny.
   (C) Sophie did this to protect Danny from the goal keeper.
   (D) Geoff did this when the goal keeper was trying to defend the goal.

10. **Answer ANY FIVE of the following six questions in 40 - 50 words each:**   (5X2 = 10)

(i) Evaluate the impact of historical events on the life of the characters in "The Last Lesson " Relate it to human experiences .

(ii) What was distinctive about Eco 's academic writing style ?

(iii) What did Gandhi and the lawyers do that invited "the vehement protests of the landlords " ?

(iv) How did the author discover who the English visitor to the studios was? (Poets and Pancakes)

(v) What are some of the reasons for people driving past to stop at the shack? Why do these people leave the occupants of the shack unhappy? (A Roadside stand)

(vi) " What embroidery was to Aunt Jennifer, poetry was for Adrienne Rich '.Do you agree? Comment with reference to the poem ' Aunt Jennifer's Tigers ' .

11. **Answer ANY TWO of the following six questions in 40 - 50 words each:**   (2X2 = 4)

(i) The author ' Kalki ' satirises the obstinacy and pride of the Maharaja through a paradox. What is it? Provide the relevant textual details to support the analysis.

(ii) What 'solution' does Mr. Lamb offer to Derry when the latter states that he doesn't like being near people that becomes a kind of lesson against his depression?

(iii) What ' sights taken together ' held the author's legs together and stopped her from going home ?

12. **Answer ANY ONE of the following two questions in 120 - 250 words:**   (5)

(a) "The different portrayals of women in the texts 'Aunt Jennifer's Tigers', 'Going Places', 'Lost Spring', and 'My Mother at Sixty-six', offer insights into the experiences of women in society.

You have been asked to address your peers and share:

(i) the ways these portrayals highlight the diversity of the female experience.

(ii) the importance of understanding each individual woman's challenge and experience. Compose this draft, with reference to any three of these prescribed texts listed above.

You may begin this way:
Good morning, everyone.
As I analysed the allotted texts...

You may end this way.
To conclude, I'd like to say that.."

OR

(b) **Fear and Courage is something that we must learn if we want to succeed in life.**
The stories Deep Water and The Rattrap symbolically portray life's challenges and courage. Douglas' courage in overcoming fear differs from that of the vagabond. Which do you   think is more difficult to harness and why?
Justify the statement "Without fear there can't be courage" with reference to how fear and courage manifest uniquely in both 'Deep Water' and 'The Rattrap'
You may begin like this
Hardships and challenges are the part and parcel of everyone's life......

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13. Answer ANY ONE of the following two questions, in 120 - 150 words: (5)

(a) A grown-up Zitkala-sa, reflects on the incident about cutting of her long hair and is conflicted that she did not do enough to resist and surrendered easily. She also wonders if she could have tried something else to prevent the incident. As the grown up Zitkala-sa, write a speech to be delivered to school students, reflecting on an event that happened many years ago.

You may begin like this

I find myself ....

OR

(b) The escaped soldier in 'The Enemy' reaches his country, where he is reunited with his family. He can't thank God enough as he recalls the harrowing experience, his subsequent rescue and recovery by Sadao and his wife Hana who were *Godsend* for him.

As the American soldier, write the diary entry expressing your thoughts and gratitude. You may begin this way:

I have served in the army for decades now ....

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE- BOARD - II (2024-25)

Class - XII	Subject – Mathematics (Core)
Time – 3 hours	Maximum Marks- 80

General Instructions:

1. This Question paper contains - five sections A, B, C, D and E. Each section is compulsory. However, there are internal choices in some questions.
2. **Section A** has 18 MCQ's and 02 Assertion-Reason based questions of **1 mark** each.
3. **Section B** has 5 Very Short Answer (VSA)-type questions of **2 marks** each.
4. **Section C** has 6 Short Answer (SA)-type questions of **3 marks** each.
5. **Section D** has 4 Long Answer (LA)-type questions of **5 marks** each.
6. Section E has 3 source based/case based/passage based/integrated units of assessment **(4 marks each)** with sub parts.

SECTION A (1 mark each)
(Multiple choice Questions)

1. Let A = {1,2,3}. Then the number of relation containing (1,2) and (2,3) which are reflexive and transitive but not symmetric, is/are
   a) 1
   b) 2
   c) 3
   d) 4

2. The domain of the function $\cos^{-1}\left(\frac{2-3x}{4}\right)$ is
   a) [-1, 1]
   b) [0, 1]
   c) [- 2/3, 2]
   d) [-4, 4]

3. If A is a square matrix and $A^2 = A$, then $(I + A)^2 - 3A$ is equal to
   a) I
   b) A
   c) 2A
   d) 3I

4. For what value of $x \in \left[0, \frac{\pi}{2}\right]$ is $A + A' = \sqrt{3}\,I$, where A= $\begin{bmatrix} \cos x & \sin x \\ -\sin x & \cos x \end{bmatrix}$
   a) $\frac{\pi}{3}$
   b) $\frac{\pi}{6}$
   c) 0
   d) $\frac{\pi}{2}$

5. If A is a 3 × 4 and B is a matrix such that A'B and AB' are both defined, then the order of the matrix B is,
   a) 3 × 4
   b) 3 × 3
   c) 4 × 4
   d) 4 × 3

6. If A is a square matrix of order 3, such that the value of $|adj\ A| = 8$, then the value of $|A^T|$ is
   a) $\sqrt{2}$
   b) $-\sqrt{2}$
   c) 8
   d) $2\sqrt{2}$

7. If $\begin{bmatrix} 2 & 0 \\ 5 & 4 \end{bmatrix}$ = P + Q, where P is a symmetric and Q is a skew symmetric matrix, then Q is equal to
   a) $\begin{bmatrix} 2 & \frac{5}{2} \\ \frac{5}{2} & 4 \end{bmatrix}$
   b) $\begin{bmatrix} 0 & -\frac{5}{2} \\ \frac{5}{2} & 0 \end{bmatrix}$
   c) $\begin{bmatrix} 0 & \frac{5}{2} \\ -\frac{5}{2} & 0 \end{bmatrix}$
   d) $\begin{bmatrix} 2 & -\frac{5}{2} \\ \frac{5}{2} & 4 \end{bmatrix}$

8. $\int_1^4 |x - 5|\, dx$ is equal to

a) $\frac{15}{2}$
b) $\frac{13}{2}$
c) 1
d) 4

9. If p<0<q, then $\int_p^q x|x|\,dx$ is equal to

a) $\frac{1}{2}(p^2 + q^2)$
b) $\frac{1}{3}(p^2 - q^2)$
c) $\frac{1}{3}(p^3 + q^3)$
d) None of these

10. The value of k for which $f(x) = \begin{cases} k(x^2 + 2); x \le 0 \\ 4x + 6; \ x > 0 \end{cases}$ is a continuous function is

a) 4
b) 3
c) 12
d) 6

11. If $|\vec{a}| = 8, |\vec{b}| = 3,$ and $|\vec{a} \times \vec{b}| = 12$ then find the value of $\vec{a}.\vec{b}$

a) $12\sqrt{3}$
b) $16\sqrt{3}$
c) $4\sqrt{3}$
d) None of these

12. The angle which the vector $(\hat{\imath} + \hat{\jmath} + \sqrt{2}\hat{k})$ makes with Z- axis is

a) $\frac{\pi}{6}$
b) $\frac{\pi}{4}$
c) $\frac{\pi}{3}$
d) $\frac{2\pi}{3}$

13. If $\vec{a} + \vec{b} = \hat{\imath}$ and $\vec{a} = 2\hat{\imath} - 2\hat{\jmath} + 2\hat{k}$, then $|\vec{b}|$ equals

a) $\sqrt{14}$
b) 3
c) $\sqrt{12}$
d) $\sqrt{17}$

14. The angle which the line $\frac{x}{1} = \frac{y}{-1} = \frac{z}{0}$ makes with the positive direction of Y – axis is

a) $\frac{5\pi}{6}$
b) $\frac{3\pi}{4}$
c) $\frac{5\pi}{4}$
d) $\frac{7\pi}{4}$

15. The order and degree of the differential equation $\left(1 + 3\frac{dy}{dx}\right)^{2/3} = 4\frac{d^3y}{dx^3}$, respectively are

a) $1, \frac{2}{3}$
b) 3,1
c) 3,3
d) 1,2

16. General solution of $\frac{dy}{dx} = \frac{y}{x}$ is

a) $y = kx^2$
b) $y = kx$
c) $y = \frac{k}{x}$
d) $yx = k$

17. A coin is tossed, then a dice is rolled, the probability of getting a 6 given that head comes up is

a) $\frac{2}{3}$
b) $\frac{1}{6}$
c) $\frac{5}{6}$
d) None of these

18. The optimal value of the objective function is attained at the points

a) on X – axis
b) on Y – axis
c) corner points of the feasible region
d) None of these

ASSERTION-REASON BASED QUESTIONS
In the following questions, a statement of assertion (A) is followed by a statement of Reason(R). Choose the correct answer out of the following choices.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true.

19. **Assertion (A):** Let a relation R defined from set A ={1,2,5,6} to A is R ={(1,1), (1,6), (6,1)}, then R is symmetric relation.

   Reason (R): A relation R in set A is called symmetric, if $(a, b) \in R \Rightarrow (b, a) \in R$ for every a,b $\in$ A.

20. **Assertion (A):** f(x) is continuous at $x = a$, $\lim_{x \to a} f(x)$ exists and equals to f(a).

   Reason(R): If f(x) is continuous at a point, then $\frac{1}{f(x)}$ is also continuous at the point.

SECTION B

**This section comprises of very short answer type questions of 2 marks each.**

21. Find the domain and range of the function $y = sin^{-1}(|x| - 1)$. Show your work.

22. If $y = sin^{-1} x$, then show that $(1 - x^2)\frac{d^2y}{dx^2} - x\frac{dy}{dx} = 0$.

OR

Find the derivative of $tan^{-1} x$ with respect to $\log x$, where $x \in (1, \infty)$.

23. During an earthquake, seismic waves radiate from the epicenter of an earthquake in a circular pattern, as shown in the given figure.
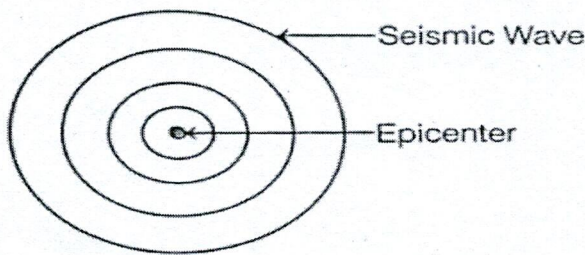
If seismic waves travel at a speed of approximately 6km/sec, then what is the rate of change of the area affected by the earthquake when the radius of the affected area is 25 km? (use $\pi = 3.14$)

24. The scalar product of the vectors $\hat{i} + \hat{j} + \hat{k}$ with a unit vector along the sum of vectors $2\hat{i} + 4\hat{j} - 5\hat{k}$ and $\mu\hat{i} + 2\hat{j} + 3\hat{k}$ is equal to one. Find μ.

25. Find the value λ for which the angle between the $2\lambda^2\hat{i} + 4\lambda\hat{j} + \hat{k}$ and $7\hat{i} - 2\hat{j} + \lambda\hat{k}$ is obtuse.

OR

Find the angle between the lines $\frac{x+5}{7} = \frac{y-2}{5} = \frac{z}{1}$ and $\frac{x}{4} = \frac{y}{3} = \frac{z}{5}$

SECTION C

This section comprises of short answer type questions of 3 marks each.

26. Find the intervals on which the function $f(x) = (x - 1)^3(x - 2)^2$ is strictly increasing and strictly decreasing.

27. Solve the following differential equation $y^2\, dx + (x^2 - xy + y^2)\, dy = 0$.

28. *Evaluate* $\int_0^{\frac{\pi}{2}} \frac{cos^2 x}{cos^2 x + 4 sin^2 x}\, dx$

29. Find a vector of magnitude 5 units, perpendicular to each of the vector $(\vec{a} + \vec{b})$ and $(\vec{a} - \vec{b})$, where $\vec{a} = \hat{i} + \hat{j} + \hat{k}$ and $\vec{b} = \hat{i} + 2\hat{j} + 3\hat{k}$.

OR

If $\vec{a} = \hat{i} + 2\hat{j} + \hat{k}, \vec{b} = 2\hat{i} + \hat{j}$ and $\vec{c} = 3\hat{i} - 4\hat{j} - 5\hat{k}$, then find a unit vector perpendicular to both of the vector $(\vec{a} - \vec{b})$ and $(\vec{c} - \vec{b})$.

30. A survey was conducted for all grade 10 students to test their inclination towards opting for Science or Commerce in grade 11. 75% of class 10 students are fluent in Mathematics while the rest are fluent in Economics. Based on past data, it is known that
   - 80% of the students are fluent in Business studies if they are fluent in Economics.
   - The probability of a student being fluent in Business studies if they are fluent in Mathematics is 15%.
   - If one of the students surveyed was found to be fluent in business studies, use Bayes' theorem to find the probability that the applicant is also fluent in Economics? Show your work.

OR

A company conducts a mandatory health check up for all newly hired employees, to check for infections that could affect other office-going employees. A blood infection affects roughly 5% of the population. The probability of a false positive on the test for this infection is 4%, while the probability of a false negative on the test is 3%.If a person tests positive for the infection, then what is the probability that they are actually infected?

(Note A false positive on a test refers to a case when a person is not infected, but tests positive for the infection. A false negative on a test refers to a case when a person is infected, but tests negative for the infection)

31. Sameer framed the following linear programming problem to minimize the monthly operational cost in running his bakery.

Minimize $Z = 200x + 300y$

Subject to the constraints

$2x + 3y \geq 1200$

$1.5y + 2x \geq 900$

$x + y \leq 400$

$x, y \geq 0$

where x is the number of orders for bread loaves and y is the number of orders for cakes. Graph the feasible region for Sameer's LPP and find the optimal solution.

SECTION D
This section comprises of long answer-type questions of 5 marks each

32. The sum of three numbers is 6. Twice the third number when added to the first number gives 7. On adding the sum of the second and third numbers to thrice the first number, we get 12. Find the numbers using matrix method.

33. If $x = 3 \sin t - \sin 3t, \ y = 3 \cos t - \cos 3t, find \ \frac{d^2y}{dx^2} \ at \ t = \frac{\pi}{3}$.

OR

Show that the function f(x) = $|x + 1| + |x - 1|$, for all x ∈ R, is continuous but not differentiable at $x = 1$.

34. Using the method of integration find the area bounded by

$3x - 2y + 1 = 0, 2x + 3y - 21 = 0, x - 5y + 9 = 0$.

OR

Find the area of the smaller part of the circle $x^2 + y^2 = a^2$ cut-off by the line $x = \frac{a}{\sqrt{2}}$.

35. Vertices B and C of ΔABC lie along the line $\frac{x+2}{2} = \frac{y-1}{-1} = \frac{z}{4}$, then find the area of the ΔABC given that A has coordinate (1, −1,2), the line segment BC has length 5 units.

SECTION E

36. IOF (Indian Olympiad Foundation) is an Educational Organization popularizing academic competitions and assisting development of competitive spirit among school children.IOF was established by leading academicians, scientists and media personalities with the aim of promoting Science, Mathematics, Computer Education, English, Social Studies etc. It strives to promote scientific attitude and temperament through innovative activities. One of those competitions -IOF (Mathematics) is conducted under 2 categories -Junior School and Middle School. From a certain district, three students from junior and two students from middle school were selected for the state level. Let $J = \{a, b, c\}, M = \{p, q\}$ represent the set of students from Junior School and Middle School, respectively, who got selected for the state level from that district.

    (i) A relation $R: J \to J$ is defined by R= $\{(x, y): x \text{ and } y \text{ are students of } J\}$. Show that R is an equivalence relation. [2]

    (ii) A function $f: J \to M$ is defined by f= {(a,p), (b,p),(c,q)}.
    Show that f is onto but not one - one. [2]

37. A tank with a rectangular base and rectangular sides, open at the top to be constructed so that its height is 2m and volume is 8 units. If the cost of the tank is Rs.700 per square metre for the base and Rs.450 per square metre for sides. Let x and y be the length and breadth of the least expensive tank.

    (i) Find the total cost in terms of x and y. [1]

    (ii) Find the cost of constructing the tank in terms of x only. [1]

    (iii) When cost is minimum, what will be the length. [2]

38. A coach is training 3 players. He observes that the player A can hit a target 4 times in 5 shots, player B can hit 3 times in 4 shots and the player C can hit 2 times in 3 shots. From this situation answer the following:
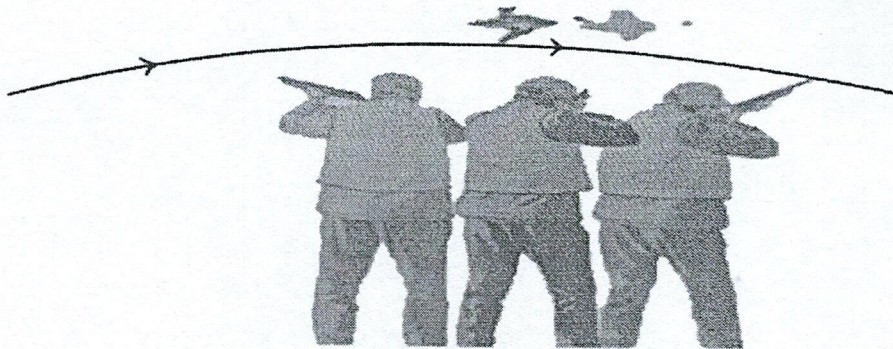
    (i) Find the probability that from A,B and C neither will hit the target. [2]
    (ii) What is the probability that 'any two of A,B and C will hit the target'? [2]

Class - XII
Time – 3 hours

Subject – Applied Mathematics
Maximum Marks- 80

General Instructions:

1. This Question paper contains - **five sections A, B, C, D and E**. Each section is compulsory. However, there are internal choices in some questions.
2. **Section A** has **18 MCQ's** and **02 Assertion-Reason based questions of 1 mark each.**
3. **Section B** has 5 **Very Short Answer (VSA)-type questions of 2 marks each.**
4. **Section C** has 6 **Short Answer (SA)-type questions of 3 marks each.**
5. **Section D** has 4 **Long Answer (LA)-type questions of 5 marks each.**
6. **Section E** has **3 source based/case based/passage based/integrated units of assessment** (4 marks each) with sub parts.

SECTION – A (20X1=20)

1. If $\int_a^b x^3 dx = 0$ and $\int_a^b x^2 dx = \frac{2}{3}$, find the value of a and b.

   (a) $a = 1, b = 1$ (b) $a = 1, b = -1$ (c) $a = -1, b = 1$ (d) $a = -1, b = -1$

2. In a school, a random sample of 145 students is taken to check whether a student's average calorie intake is 1500 or not. The collected data of average calories intake of sample students is presented in a frequency distribution which is called a

   (a) Statistics   (b) Sampling distribution   (c) Parameter   (d) Population sampling

3. If the total revenue (Rs.) received from the sale of x units of a product is given by $R(x) = 3x^2 + 36x + 5$, then the marginal revenue, when $x = 15$ is

   (a) 116   (b) 96   (c) 90   (d) 126

4. The maximum value of $\dfrac{\log x}{x}$ is.

   (a) e (b) $2e$ (c) $\dfrac{1}{e}$ (d) $\dfrac{2}{e}$

5. A sample of 50 bulbs is taken at random. Out of 50 we found 15 bulbs are of Bajaj, 17 are of Surya and 18 are of Crompton. What is the point estimate of population proportion of Surya?

   (a) 0.3   (b) 0.34   (c) 0.36   (d) 0.4

6. In an LPP. if the objective function $Z = ax + by$ has same maximum value on two corner points of the feasible region, then the number of points at which maximum value of Z occurs is.

   (a) 0   (b) 2   (c) finite   (d) infinite

7. There are 50 telephone lines in an exchange. The probability that any one of them will be busy is 0.1. The probability that all the lines are busy is

   (a) $\dfrac{5^0 e^{-5}}{0!}$ (b) $1 - \dfrac{5^0 e^{-5}}{0!}$ (c) $\dfrac{5^{50} e^{-5}}{50!}$ (d) $1 - \dfrac{5^{50} e^{-5}}{50!}$

8. Suman purchased 4000 shares of Rs.100 each at a premium of Rs.25. If company declares a dividend of 10%, then her rate of return is
   (a) 8%   (b) 10%   (c) 12%   (d) 15%

9. If $y = \dfrac{e^x + e^{-x}}{e^x - e^{-x}}$, then $\dfrac{dy}{dx} =$
   (a) y^2 (b) $1 - y^2$ (c) $y^2 - 1$ (d) $1 + y^2$

10. The mean of the probability distribution of the number of doublets in 4 throws of a pair of dice is
   (a) 1   (b) $\dfrac{2}{3}$ (c) $1\dfrac{3}{5}$ (d) $2\dfrac{2}{3}$

11. Find $(482 \times 813) \bmod 7$.
   (a) 0   (b) 2   (c) 4   (d) 6

12. Find the last two digits of 2^{20}.
   (a) 54   (b) 66   (c) 76   (d) 80

13. A factory production is delayed for three weeks due to breakdown of a machine and unavailability of spare parts. Under which trend oscillation does this situation fall?
   (a) Seasonal   (b) Cyclical   (c) Secular   (d) Irregular

14. The present value of a perpetuity of Rs.750 payable at the beginning of each year, if money is worth 5% p.a., is
   (a) Rs.15000   (b) Rs.15750   (c) Rs.14250   (d) none of these

15. The equation of the normal to the curve $y = x^2 - x$ at $(1, 0)$ is
   (a) $x + y = 0$ (b) $x - y = 0$ (c) $x + y = 1$ (d) $x - y = 1$

16. If $A = [a_{ij}]_{2\times 2}$ where $a_{ij} = \begin{cases} 1, & if\ i \neq j \\ 0, & if\ i = j \end{cases}$ then A^2 is equal to
   (a) I   (b) A   (c) O   (d) none of these

17. If $A = \begin{bmatrix} 1 & 2 & x \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & -2 & y \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ and $AB = I_3$, then $(x + y)$ equals
   (a) 0   (b) -1   (c) 2   (d) -2

18. The order and the degree of the differential equation $\left(\dfrac{dy}{dx}\right)^5 + 3xy\left(\dfrac{d^3 y}{dx^3}\right)^2 + y^2\left(\dfrac{d^2 y}{dx^2}\right)^3 = 0$, respectively, are
   (a) 2, 3   (b) 3, 2   (c) 3, 5   (d) 1, 5

ASSERTION – REASONING TYPE QUESTIONS

Statement I is called Assertion (A) and Statement II is called Reason (R). Read the given statements carefully and choose the correct answer from the options given below:
a) Both the Statements are true and Statement II is the correct explanation of Statement I.
b) Both the Statements are true and Statement II is not the correct explanation of Statement I.
c) Statement I is true, Statement II is false.
d) Statement I is false, Statement II is true.

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19. **Statement I:** A man invests Rs.25000 in Rs.100 shares available at Rs.125. If the dividend paid by the company is 10%, then his rate of return is 8%

    Statement II: Rate of return $= \dfrac{\text{Net profit / loss}}{Cost - of - investment} \times 100$.

20. Let A be a square matrix.

    Statement I: Every square matrix can be expressed as the sum of symmetric and skew symmetric matrices.

    Statement II: $(A + A')$ is symmetric matrix and $(A - A')$ is skew symmetric matrix.

SECTION – B (5x2=10)

21. Two vessels A and B contain milk and water in the ratio 3:2 and 7: 13 respectively. They are mixed in the ratio 2: 3. Find the ratio of milk and water in the final mixture.

22. A man takes twice as long as to row a distance against the stream as to row the same distance in the direction of stream. Find the ratio of speed of man in still water to the speed of stream.

23. In a race of 600 m, A can beat B by 60 m and in a race of 500 m, B can beat C by 50 m. By how much metres will A beat C in a race of 400 m?

24. Let X denote the number of hours you study on a Sunday. Also it is known that

$$P(X = x) = \begin{cases} 0.1 & , \text{if } x = 0 \\ kx & , \text{if } x = 1 \, or \, 2 \\ k(5-x) & , \text{if } x = 3 \, or \, 4 \\ 0 & , otherwise \end{cases}$$

, where k is a constant

    (i) Find the value of k.
    (ii) What is the probability that you study atleast two hours?

    OR

    In 3 trials of a binomial distribution, the probability of 2 successes is 9 times the probability of 3 successes. Find the probability of success in each trial.

25. Solve the following equation for x:

$$\begin{vmatrix} a+x & a-x & a-x \\ a-x & a+x & a-x \\ a-x & a-x & a+x \end{vmatrix} = 0$$

    OR

    Find the value(s) of x if the area of the triangle with vertices $(x, 4), (2, -6)$ and $(5, 4)$ is 35 sq. units.

SECTION – C (6x3=18)

26. A manufacturer has 600 litres of 12% solution of acid. How many litres of 30% acid solution must be added to it so that acid content in the resulting mixture will be more than 15% but less than 18% acid?

    OR

    Solve the following system of inequalities for real x : $\dfrac{2x-3}{4} + 8 \geq 2 + \dfrac{4x}{3}$ and $\dfrac{5-2x}{3} \leq \dfrac{x}{6} - 5$

3

27. Consider the following hypothesis test:-

$H_0 : \mu = 15$

$H_a : \mu \neq 15.$

A sample of 50 provided a sample mean of 14.15. The population standard deviation is 3.
(Use value of $\sqrt{50} = 7.071$)

   i.   Computer the value of the test statistic.
   ii. What is the p-value? (The area under the standard normal curve to the left of Z is 0.0228)
   iii. At $\alpha = 0.05$, what is your conclusion?

OR

Let us consider the average rainfall in a given area is 8 inches. However, a local meteorological department claims that rainfall was above average from 2016-2020 and argues that average rainfall during this period was significantly different from overall average rainfall. The following is the average rainfall for the observed period of 2016-2020.

Year	2016	2017	2018	2019	2020
Rainfall (inches)	8	5	7	5	6

Is the meteorological department's claim about the rainfall true? (Given $\alpha = 0.025$)

28. For a Poisson distribution model, if arrival rate of passengers at an airport is recorded 30 per hour on a given day. Find:- (Use $e^{-5} = 0.0067$)
   (a) the expected number of arrivals in the first 10 minutes of an hour.
   (b) the probability of exactly 4 arrivals in the first 10 minutes of an hour.
   (c) the probability of 4 or fewer arrivals in the first 10 minutes of an hour.

29. A machine costing Rs.200000 has effective life of 7 years and its scrap value is Rs.30000. What amount should the company put into a sinking fund earning 5% per annum, so that it can replace the machine after its useful life? Assume that a new machine will cost Rs.300000 after 7 years.
   (Use the value $(1.05)^7 = 1.407$ and $S_{\overline{7}|0.05} = 8.142$)

30. Maximize $Z = 5x + 10y$ subject to the constraints

$x + 2y \leq 120, \qquad x + y \geq 60, \qquad x - 2y \geq 0, \qquad x \geq 0, \ y \geq 0.$

31. The weights of students of class XII follow normal distribution with mean 50 kg and standard deviation 2 kg. Find the probability that a student selected at random will have weight
   (a) less than 45 kg.
   (b) more than 54 kg.

SECTION – D (4x5=20)

32. The profit of a paper bag manufacturing company (in lakhs of rupees) during each month of a year is given in the following table. Obtain the four year moving average for the following series of observations and plot these on the graph paper :

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Profit	1.2	0.8	1.4	1.6	2.0	2.4	3.6	4.8	3.4	1.8	0.8	1.2

OR

Fit a straight line trend by the method of least square for the following data. Also, tabulate the trends values.

Year	1995	1996	1997	1998	1999	2000	2001	2002
Sales (in Rs.crores)	6.7	5.3	4.3	6.1	5.6	7.9	5.8	6.1

33. The equilibrium conditions for three competitive markets are described as given below, where p_1, p_2 and p_3 are the equilibrium price for each market respectively:

$4p_1 + 3p_2 + 2p_3 = 37000, 5p_1 + 3p_2 + 4p_3 = 47000, p_1 + p_2 + p_3 = 12000$.

Using matrix method, find the values of respective equilibrium prices.

34. In a certain culture of bacteria, the rate of increase is proportional to the number present. It is found that there are 10,000 bacteria at the end of 3 hours and 40,000 bacteria at the end of 5 hours How many bacteria were present in the beginning?

OR

Evaluate the following integral:

$$\int \frac{x^3}{x^4 + 3x^2 + 2} dx.$$

35. The cost of a washing machine depreciates by Rs.720 during the second year and by Rs.648 during the third year. Calculate:
(a) the rate of depreciation per annum.
(b) the original cost of the machine.
(c) the value of the machine at the end of third year.

SECTION – E (3x4=12)

36. Mr. Dhar is an architect. He designed a building and provided an entry door in the shape of a rectangle surmounted by a semicircular opening. The perimeter of the door is 10 m.
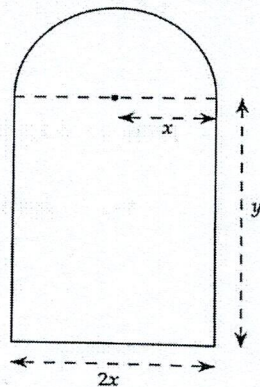
Based on the above information, answer the following questions:

(a) If $2x$ metres and y metres be the breadth and the height of the rectangular part of the door, then find the relation between x and y. [1]

(b) If $A(x) (sq. m)$ is the area enclosed by the door, then find $A(x)$. [1]

(c) To allow maximum airflow inside the building, find the dimensions of the door. [2]

OR

(c) Find the area of the door which permits the maximum air flow inside the building. [2]

37. In year 2000, Mr. Talwar took a home loan of Rs.3000000 from State Bank of India at 7.5% p.a. compounded monthly for 20 years. [Use $(1.00625)^{240} = 4.4608$ $(1.00625)^{91} = 1.7629$ $(1.00625)^{48} = 1.1187$]

Based on the above information, answer the following questions:

(a) Find the equated monthly installment (EMI) paid by Mr. Talwar. [1]

(b) Find the total interest paid by Mr. Talwar [1]

(c) Find the interest paid by Mr. Talwar in 150th payment. [2]

OR

(c) Find the principal paid by Mr. Talwar in 150th payment [2]

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38. A company has two factories located at P and Q and has three depots situated at A, B and C. The weekly requirement of the depots at A, B and C is respectively 5, 5 and 4 units, while the production capacity of the factories at P and Q are respectively 8 and 6 units. The cost (in Rs.) of transportation per unit is given below. If factory P supply x units per week to depot A and y units to depot B.

	Cost (in Rs.)		
To From	A	B	C
P	160	100	150
Q	100	120	100

Based on the above information, answer the following questions:
(a) Find the total transportation cost in terms of x and y ? [1]
(b) Write all the constraint inequations in terms of x and y [1]
(c) How many units should be transported from each factory to each depot in order that the transportation cost is minimum, if $x > 0, y > 0$? [2]

OR

(c) How many units should be transported from each factory to each depot in order that the transportation cost is maximum, if $x > 0, y > 0$. [2]

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38. A company has two factories located at P and Q and has three depots situated at A, B and C. The weekly requirement of the depots at A, B and C is respectively 5, 5 and 4 units, while the production capacity of the factories at P and Q are respectively 8 and 6 units. The cost (in Rs.) of transportation per unit is given below. If factory P supply x units per week to depot A and y units to depot B.

Cost (in Rs.)			
To From	A	B	C
P	160	100	150
Q	100	120	100

Based on the above information, answer the following questions:

(a) Find the total transportation cost in terms of x and y ? [1]
(b) Write all the constraint inequations in terms of x and y [1]
(c) How many units should be transported from each factory to each depot in order that the transportation cost is minimum, if $x > 0, y > 0$? [2]

OR

(c) How many units should be transported from each factory to each depot in order that the transportation cost is maximum, if $x > 0, y > 0$. [2]

inequations

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DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII	Subject – Sociology
Time – 3 Hours	Maximum Marks- 80

General Instructions

1. The question paper is divided into four sections.
2. There are 35 questions in all. All questions are compulsory.
3. Section A includes question No. 1-16. These are objective type questions.
4. Section B includes question No. 17-25. These are very short answer type questions carrying 2 marks each. Answer to each question should not exceed 30 words.
5. Section C includes question No. 26-32. These are short answer type questions carrying 4 marks each. Answer to each question should not exceed 80 words. Question no. Section D includes question No. 33-35. They are long answer type questions carrying 6 marks each. Question No. 33 is to be answered on the basis of image provided. Answer to each question should not exceed 200 words each. Question no 34 is to be answered with the help of the passage given.

SECTION - A

1. While population rises in geometric progression, agricultural production can only grow in arithmetic progression.
   Which of the following appropriately explains the progressions?
   I. 2, 4, 8, 16 and 2, 4, 6, 8 respectively.
   II. 2,4,6,8 and 2, 4, 8, 16 respectively.
   III. 3, 6, 12, 24 and 3, 6, 9, 12 respectively.
   IV. 3, 6, 9, 12 and 3,6,12,24 respectively.
   (a) I and II
   (b) II and IV
   (c) I and III
   (d) I and IV

2. Which of the following statements is not true with regard to Colonialism and Caste.
   (a) All major social institutions and specially the institution of caste underwent major changes during the Colonial period.
   (b) All the changes brought about by colonialism were intended or deliberate.
   (c) Initially, the British administrators began by trying to understand the complexities of caste in an effort to learn how to govern the country efficiently.
   (d) The 1901 census, under the direction of Herbert Risley, was particularly important as it sought to collect information on the social hierarchy of caste.

1

3. Which of the following is NOT true for a community conflict?
   (a) Communities become reversed mirror images of each other in a community conflict.
   (b) People often react emotionally in case of any perceived threat to their community identity.
   (c) Community identities provide a sense of security and satisfaction to its members.
   (d) Community conflicts can be resolved easily

4. **Assertion (A):** Swami Vivekananda is known as a rationalist and the leader of the lower caste movement in south India.
   Reason (R): He aroused people to realise that all men are equal and that it is the birthright of every individual to enjoy liberty and equality.
   Codes
   (a) Both A and R are true and R is the correct explanation of A.
   (b) Both A and R are true but R is not the correct explanation of A.
   (c) A is true but R is false.
   (d) A is false but R is true.

5. **Assertion (A):** The impact of Sanskritization is many sided.
   Reason (R): Its influence can be seen in language, literature, ideology, music, dance, drama, style of life and ritual.
   Codes
   (a) Both A and R are true and R is the correct explanation of A.
   (b) Both A and R are true but R is not the correct explanation of A.
   (c) A is true but R is false.
   (d) A is false but R is true.

6. **Assertion (A):** The rural in Kerala is a mixed economy.
   Reason (R): The economy in Kerala integrates agriculture with a wide network of retail sales and services. There are large number of families are dependent on remittance from abroad.
   Codes
   (a) Both A and R are true and R is the correct explanation of A.
   (b) Both A and R are true but R is not the correct explanation of A.
   (c) A is true but R is false.
   (d) A is false but R is true.

7. The classification of four **Varanas** is approximately how many years old?
   (a) 3000 years
   (b) 4000 years
   (c) 2000 years
   (d) 5000 years

8. **Assertion (A):** A lower caste could not share food with the higher caste.
   Reason(R): Castes were not traditionally linked to occupations.
   Codes
   (a) Both A and R are true and R is the correct explanation of A.
   (b) Both A and R are true but R is not the correct explanation of A.
   (c) A is true but R is false.
   (d) A is false but R is true.

9. The rise of caste-based political parties has been considered since the decade of..........
   (a) 1960s
   (b) 1970s
   (c) 1990s
   (d) 1980s

10. The system under which revenue (Lagaan) was estimated by considering the entire village land as one unit was called...........
    (a) Mahalwari system
    (b) Zamindari system
    (c) Raiyatwari system
    (d) None of these

11. Farmer suicide is a matrix event. Which of the following options is NOT responsible for farmer suicide?
    (a) Educational expenses
    (b) Agriculture loans
    (c) Marriage and dowry
    (d) Diversification

12. When religious identity overrides everything else it leads to.
    (a) Secularism.
    (b) communalism
    (c) Nation- State.
    (d) Diversity.

13. **Assertion (A):** A communalist develops an aggressive political identity that condenses every other religion and leads to communal riots.
    Reason(R): Communalism is more to do with politics than religion in India because politicians use vote banks in the name of religion. They give seats for religion.
    (a) Both A and R are true and R is the correct explanation of A.
    (b) Both A and R are true but R is not the correct explanation of A.
    (c) A is true but R is false.
    (d) A is false but R is true.

14. **Assertion (A):** Indian nationalists, the issue of economic expectation under colonial rule was a central issue.
    Reason (R): Indian nationalists saw rapid industrialisation of the economy as the path towards both growth and social equity.
    (a) Both A and R are true and R is the correct explanation of A.
    (b) Both A and R are true but R is not the correct explanation of A.
    (c) A is true but R is false.
    (d) A is false but R is true.

15. According to the 2010-11 Economic Survey in India, what percent of people were employed in the primary sector (agriculture and mines)?
    (a) 60%
    (b) 65%
    (c) 50%
    (d) 55%

16. Struggle of share croppers in the year 1946-47 was a movement for 2 / 3rd share of their produce instead of customary half.
    (a) Telangana.
    (b) Tebhaga.
    (c) Bardoli.
    (d) Champaran Satyagraha.

SECTION B

17. Kumudtai's journey into Sanskrit began with great interest and eagerness with Gokhale Guruji, her teacher at school....At the University, the Head of the department was a well known scholar and he took great pleasure in taunting Kamudtai...Despite the adverse comments, she successfully completed her Masters in Sanskrit....
Source: Kumud Pawade (1938)
Read the source and answer the following question.
Q. Do you think Sanskritization is a gendered process? Give a reason for your answer.

OR

Many of our cultural practices and patterns can be traced to our agrarian backgrounds. Structural and cultural changes are closely interrelated. Most of the New Year festivals in different regions of India celebrate the main harvest season.

Q. There is a close relationship between agriculture and culture. Give one reason to support the given statement.

18. State any two laws passed by the Indian Government to prohibit caste discrimination.

19. What are various occupations followed in rural society?

20. Caste has become all too visible for the scheduled castes and tribes. Give two examples from daily life to support this statement.

21. Distinguish between social movement and social change.

22. Explain two reasons for the decline in sex ratio in some of the prosperous regions of India.

23. What evidence would you offer against the view that tribes are primitive communities living isolated lives untouched by civilisation?

24. Contract farming can be defined as agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product or products. Typically, the farmer agrees to provide agreed quantities of a specific agricultural product.
    i. Explain the role MNC's in contract farming.
    ii. Is contract farming affects farmers negatively as well?

OR

The 70s also witnessed the emergence of the 'autonomous' women's movement. During the mid 70s, many educated women took to radical, active politics, and simultaneously promoted an analysis of women's issues. Groups of women came together in many cities.

Source: Ilina Sen "Women's Politics in India" in ed. Maitrayee Chaudhuri Feminism in India (Women Unlimited/Kali, New Delhi, 2004) PP. 187-210.
    i. What were the main concerns of social reformers in the 19th century?
    ii. Who started the first school for girls in India?

25. Write a note on the process of disinvestment.

SECTION C

26. What are the loopholes associated with implementation of Land Ceiling Act ?

27. The argument for a tribe – caste distinction is based on cultural difference between Hindu Caste, with their beliefs in purity and pollution and hierarchical integration, and 'animist' tribes with their egalitarian social organisation. Justify the statement

OR

What are the major issues of concern to adivasis today?

28. Discuss the impact of caste on contemporary Indian society?

29. What are the effects of industrialisation on society?

30. What three changes came in Indian society due to social movements? Explain them.

31. What do you mean by communal politics?

32. What is the negative impact of industrialisation on labourers and surrounding people?

SECTION D

33. **Read the text carefully and answer the questions:**

The graph of Kerala in 2026 is given below:

Kerala 2026
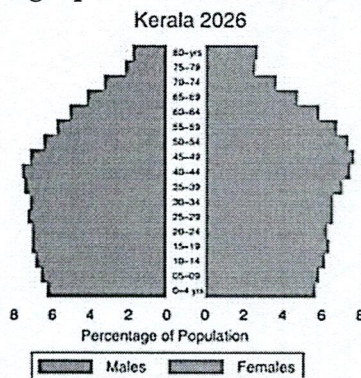
i. How is the population pyramid structure of a developed country different from a developing country?

ii. What type of population pyramid would a more developed country have?

iii. The Age Group pyramid of Kerala has narrow base. Why?

34. **Read the text carefully and answer the questions:**

Social exclusion refers to ways in which individuals may become; cut off from full involvement in the wider society. It focuses attention on a broad range of factors that prevent individuals or groups from having opportunities open to the majority of the population. In order to live a full and active life, individuals must not only be able to feed, clothe and house themselves, but should also have access to essential goods and services such as education, health, transportation, insurance, social security, banking and even access to the police or judiciary. Social exclusion is not accidental but systematic - it is the result of structural features of society.

i. What do you mean by social exclusion? Social exclusion is not accidental but systematic. Comment. (1+2=3)

ii. Describe contribution of social reformers for abolition of untouchability. (3)

35. How did peasant movements evolve from pre-colonial days to post colonial times

OR

Describe the history of labour related movements in India.

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DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD – II (2024-25)

Class - XII
Time – 3 Hours

Subject – Geography
Maximum Marks-70

General Instructions:
Read the following instructions carefully and follow them:
(i) This question paper contains 30 questions. All questions are compulsory.
(ii) Question paper is divided into five sections A, B, C, D and E.
(iii) Section A Question Nos. 1 to 17 are Multiple Choice type questions. Each question carries 1 mark.
(iv) Section B Question Nos. 18 and 19 are Source-based questions. Each question carries 3 marks.
(v) Section C Question Nos. 20 to 23 are Short Answer type questions. Each question carries 3 marks. Answer to these questions shall be written in 80 to 100 words.
(vi) Section D Question Nos. 24 to 28 are Long Answer type questions. Each question carries 5 marks. Answer to these questions shall be written in 120 to 150 words.
(vii) Section E Question Nos. 29 and 30 are Map-based questions. Each question carries 5 marks.
(viii) There is no overall choice given in the question paper. However, an internal choice has been provided in few questions in all sections other than Sections A and B.

SECTION A
Question numbers 1 to 17 are Multiple Choice Type Questions. [17x1=17]

1. Identify the feature of mixed farming from the following: [1]
   (A) It is most advanced and efficient type of rearing milch animals.
   (B) The regions where farmers specialised in vegetables only.
   (C) Equal emphasis is laid on crop cultivation and animal husbandry.
   (D) It was introduced by the Europeans in colonies.

2. There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below. [1]
   Assertion (A): Industries based on ores are located close to the sources of raw material.
   Reason (R): Industries maximise profits by reducing transportation costs.
   Options:
   (A) Both (A) and (R) are true but (R) is not the correct explanation of (A).
   (B) Both (A) and (R) are true and (R) is the correct explanation of (A).
   (C) Both (A) and (R) are incorrect.
   (D) (A) is correct but (R) is incorrect.

3. Read the following characteristics of wholesale trading carefully and choose the correct option: [1]
   | i. It is constituted by numerous intermediaries, merchants and supply houses. |
   | ii. Wholesalers often extend credit to retail stores. |
   | iii. Generally retailers operate very largely on the wholesaler's capital. |
   | iv. Mail order, automatic vending machines, street vendors are some of its examples. |

   Options:
   (A) Only i, ii and iii are correct.
   (B) Only ii, iii and iv are correct.
   (C) Only i, iii and iv are correct.
   (D) Only i, ii and iv are correct.

4. Which one of the following is the easternmost station of 'Trans-Siberian Railway'? [1]
   (A) Vladivostok
   (B) St. Petersburg
   (C) Moscow
   (D) Khabarovsk

5. Most of the world's great ports are classified as: [1]
   (A) Naval Ports
   (B) Comprehensive Forts
   (C) Oil Ports
   (D) Industrial Ports

6. Which one of the following is the smallest linguistic group of India? [1]
   (A) Indo – European
   (B) Austric
   (C) Dravidian
   (D) Sino – Tibetan

7. There are four distinct phases of population growth identified in India over the last one century. Identify the phase from the given description. [1]
   This period is referred to as the period of population explosion in India, which was caused by a rapid fall in the mortality rate but a high fertility rate of population in the country. The average annual growth rate was as high as 2.2 per cent. It is in this period, after the Independence, that developmental activities were introduced through a centralised planning process and economy started showing up ensuring the improvement of living condition of people at large. Consequently, there was a high natural increase and higher growth rate.
   (A) Phase I 1901-1921
   (B) Phase II 1921-1951
   (C) Phase III 1951-1981
   (D) Phase IV post 1981 till present

8. Choose the correct option related to Industrial towns in India: [1]
   (A) Chandigarh, Shillong and Imphal
   (B) Salem, Modinagar and Bhilai
   (C) Itarsi, Katni and Kandla
   (D) Ambala, Jalandhar and Mhow

9. Match the Column I with Column II and choose the correct option: [1]

Column I	Column II
i. Clustered	a. Isolated settlement
ii. Semi-clustered	b. Units are locally known as Panna, Para, Palli etc.
iii. Hamleted	c. Fragmented settlement
iv. Dispersed	d. Closely built up region

   Options:
   (A) i-a, ii-b, iii-c, iv-d
   (B) i-d, ii-c, iii-b, iv-a
   (C) i-b, ii-a, iii-c, iv-d
   (D) i-c, ii-b, iii-a, iv-d

10. Which of the following is an example of an 'educational town'? [1]
    (A) Surat
    (B) Mumbai
    (C) Aligarh
    (D) Bhopal

2

11. In which of the following group of countries of the world HYVs of wheat and rice were developed? [1]
    (A) Japan and Australia
    (B) Mexico and Philippines
    (C) U.S.A. and Japan
    (D) Mexico and Singapore

12. Bharmaur tribal area belongs to which of the following states? [1]
    (A) Uttarakhand
    (B) Rajasthan
    (C) Uttar Pradesh
    (D) Himachal Pradesh

13. Match Column I with Column II and choose the correct option. [1]

Column I	Column II
(Railway zone)	(Headquarter)
I. South East Central	1. Secunderabad
II. East Central	2. Bilaspur
III. West Central	3. Hajipur
IV. South Central	4. Jabalpur

Options:

	I	II	III	IV
(A)	4	1	3	2
(B)	2	4	1	3
(C)	2	3	4	1
(D)	3	1	4	2

14. Which is the major export from New Mangalore port? [1]
    (A) Coal
    (B) Iron ore
    (C) Copper
    (D) Mica

Study the given graph and answer the following question nos. 15 -17:
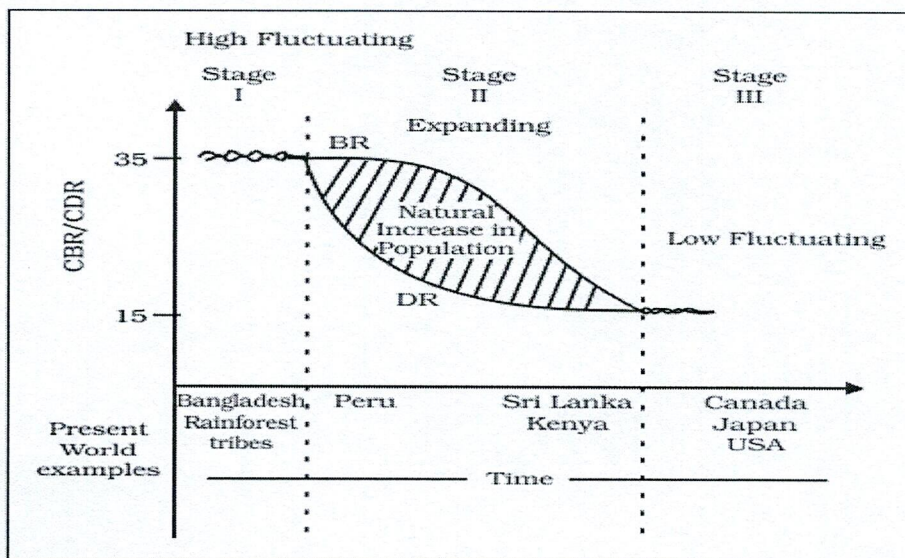
Demographic Transition Theory

3

15. How does the natural increase in population occur, as per the graph? [1]
    (A) Birth Rate – Death Rate
    (B) Death Rate + Birth Rate
    (C) Growth Rate - Birth Rate
    (D) Birth Rate + Migration

16. What does the transition from high fluctuating stage to low fluctuating stage indicate? [1]
    (A) Shift from Urban Industrial economy to Rural Agrarian economy
    (B) Shift from Rural Agrarian economy to Urban Industrial economy
    (C) Low Birth and Death Rate to High Birth and Death Rate
    (D) Migration from Urban to Rural areas

17. From the given graph, what condition can you infer about the least developed countries? [1]
    (A) High Birth Rate and High Death Rate
    (B) Low Birth rate and Low Death rate
    (C) High Birth Rate and Low Death Rate
    (D) Low Birth Rate and High Death Rate

SECTION B
Question numbers 18 and 19 are Source-based Questions. [2x3=6]

18. **Read the passage carefully and answer the questions that follow:** [3x1=3]
    The population of India according to their economic status is divided into three groups, namely; main workers, marginal workers and non-workers.
    It is observed that in India, the proportion of workers (both main and marginal) is only 39.8 per cent (2011) leaving a vast majority of about 60 per cent as non-workers. This indicates an economic status in which there is a larger proportion of dependent population, further indicating possible existence of large number of unemployed or under employed people.
    The proportion of working population, of the states and Union Territories show a variation from about 29.1 per cent in Lakshdweep to about 51.9 per cent in Himachal Pradesh. The states with larger percentages of workers are Himachal Pradesh, Sikkim, Chhattisgarh, Andhra Pradesh, Karnataka, Arunachal Pradesh, Nagaland, Manipur and Meghalaya. Among the Union Territories, Dadra and Nagar Haveli and Daman and Diu have higher participation rate. It is understood that, in the context of a country like India, the work participation rate tends to be higher in the areas of lower levels of economic development since number of manual workers are needed to perform the subsistence or near subsistence economic activities
    (I) Who are the marginal workers in India?
    (II) Name any two groups of Indian population according to their economic status?
    (III) 'The proportion of working population of the states of India shows a variation'. Explain the statement.

19. **Observe the given figure and answer the questions that follow:** [3x1=3]
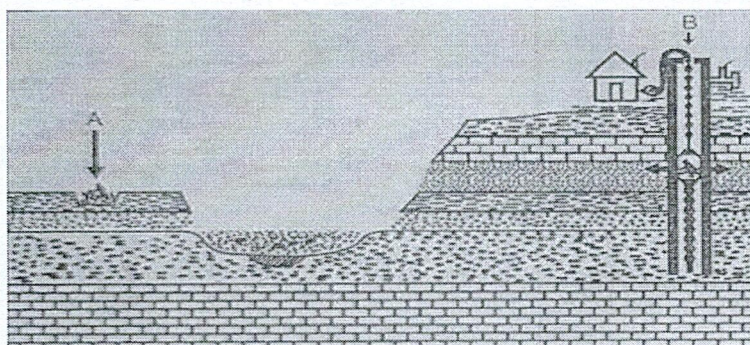
Methods of Mining

(I) Two types of mining are shown in as A and B. Identify them and give the correct name of each.

(II) Which is the easiest and the cheapest way of mining minerals?

(III) Why are developed economies retreating from mining, processing and refining stages of production?
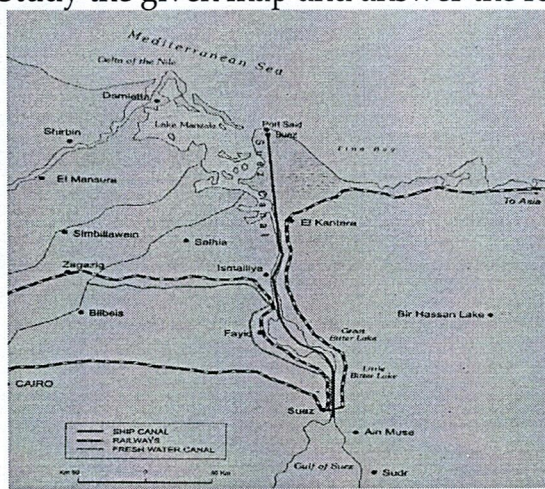
SECTION C
Question numbers 20 to 23 are Short Answer Type Questions. [4x3=12]

20. "The imprints of human activities are created everywhere." Evaluate the statement in context of humanisation of nature. [3]

OR

Explain the concept of 'nondeterminism' with suitable examples.

21. Study the given map and answer the following questions: [1+1+1=3]

(I) Identify and name the canal shown on the map.

(II) Name the seas connected by this canal.

(III) Why is this canal considered a gateway of Europe to the Indian Ocean?

22. 'The chief gateways of the world of international trade are the harbours and ports'. Justify the statement with examples. [3]

23. "A declining availability of fresh water and increasing demand are the compelling reasons for conservation and effective management of water in India." Justify the statement. [3]

SECTION D
Question numbers 24 to 28 are Long Answer Type Questions. [5x5=25]

24. What is human development? Explain any four approaches to study Human Development in the world [5]

25. **A.** Analyse the classification of industries on the basis raw materials. [5]

OR

B. "High technology is the latest generation of manufacturing activities." Examine the statement.

26. **A.** "Pipelines are the most convenient and efficient mode of transportation in India". Examine the statement with examples. [5]

<center>**OR**</center>

B. Explain the five National Waterways of India.

27. **A.** Describe the distribution of iron ore in India. [5]

<center>**OR**</center>

B. Explain the importance of solar energy in Indian context.

28. **A.** How do slums develop in India? Explain any four problems faced by slum dwellers in India. [5]

<center>**OR**</center>

B. Explain the causes and consequences of water pollution.

<center>## SECTION E</center>

<center>**Question numbers 29 & 30 are Map based questions having 5 sub-parts each. [2x5=10]**</center>

29. On the given political map of the world, seven geographical features have been marked as A, B, C, D, E, F and G. Identify any five with the help of the following information and write their correct names on the lines drawn near each feature. [5]
    (A) A major sea port
    (B) An international airport
    (C) A canal connects the Pacific Ocean and the Atlantic Ocean
    (D) An area of nomadic herding in Asia
    (E) An important airport of Europe
    (F) An area of subsistence gathering in Africa
    (G) An area of extensive commercial grain farming

30. Locate and label any five of the following geographical features on the Political Outline map of India with appropriate symbols: [5]
    (A) An important sea port in Gujarat
    (B) An important coal mine in West Bengal
    (C) Khetari - copper mines
    (D) An important iron ore mine in Maharashtra
    (E) The state with highest population density (2011)
    (F) The state leading in the production of coffee
    (G) An international airport in Punjab
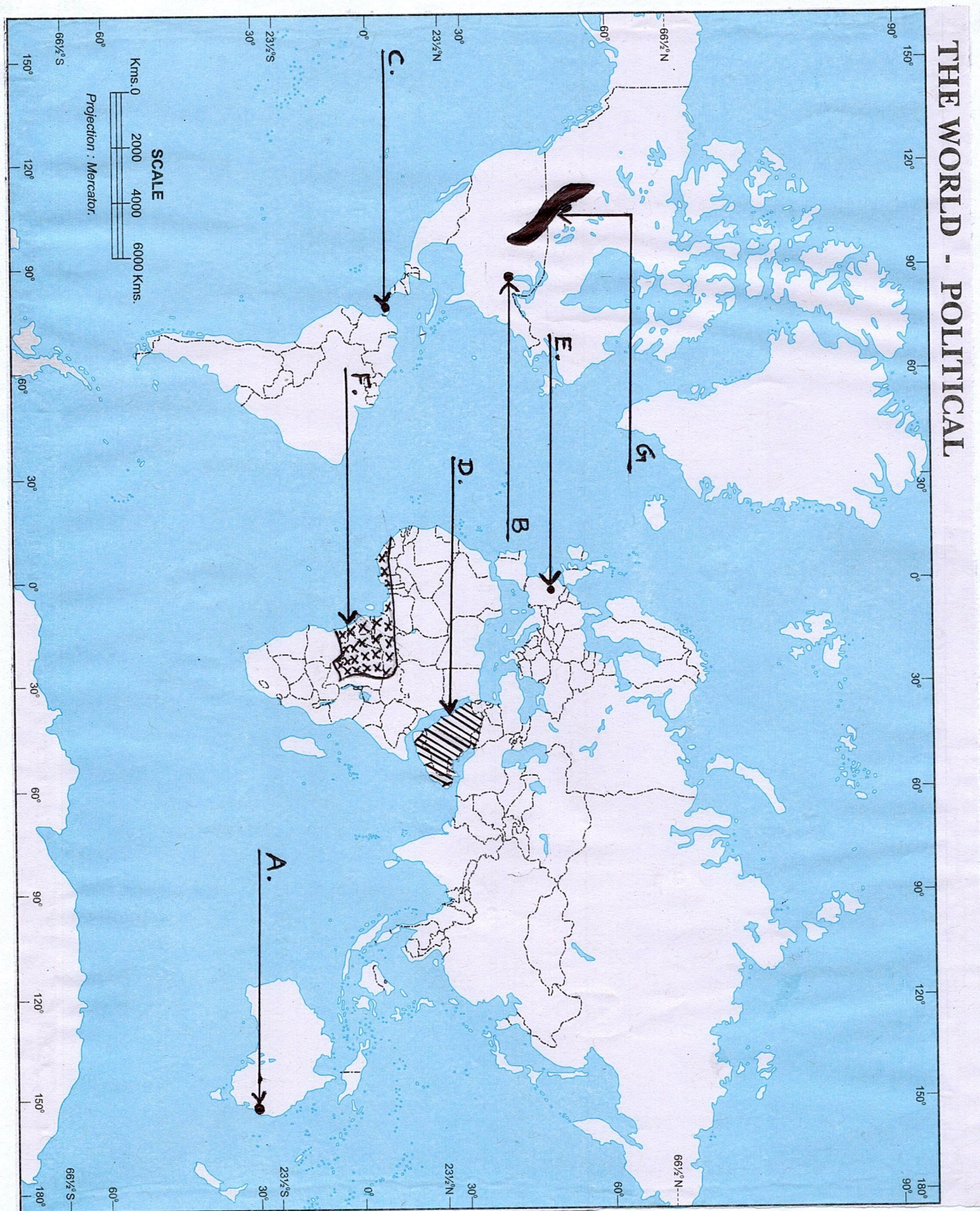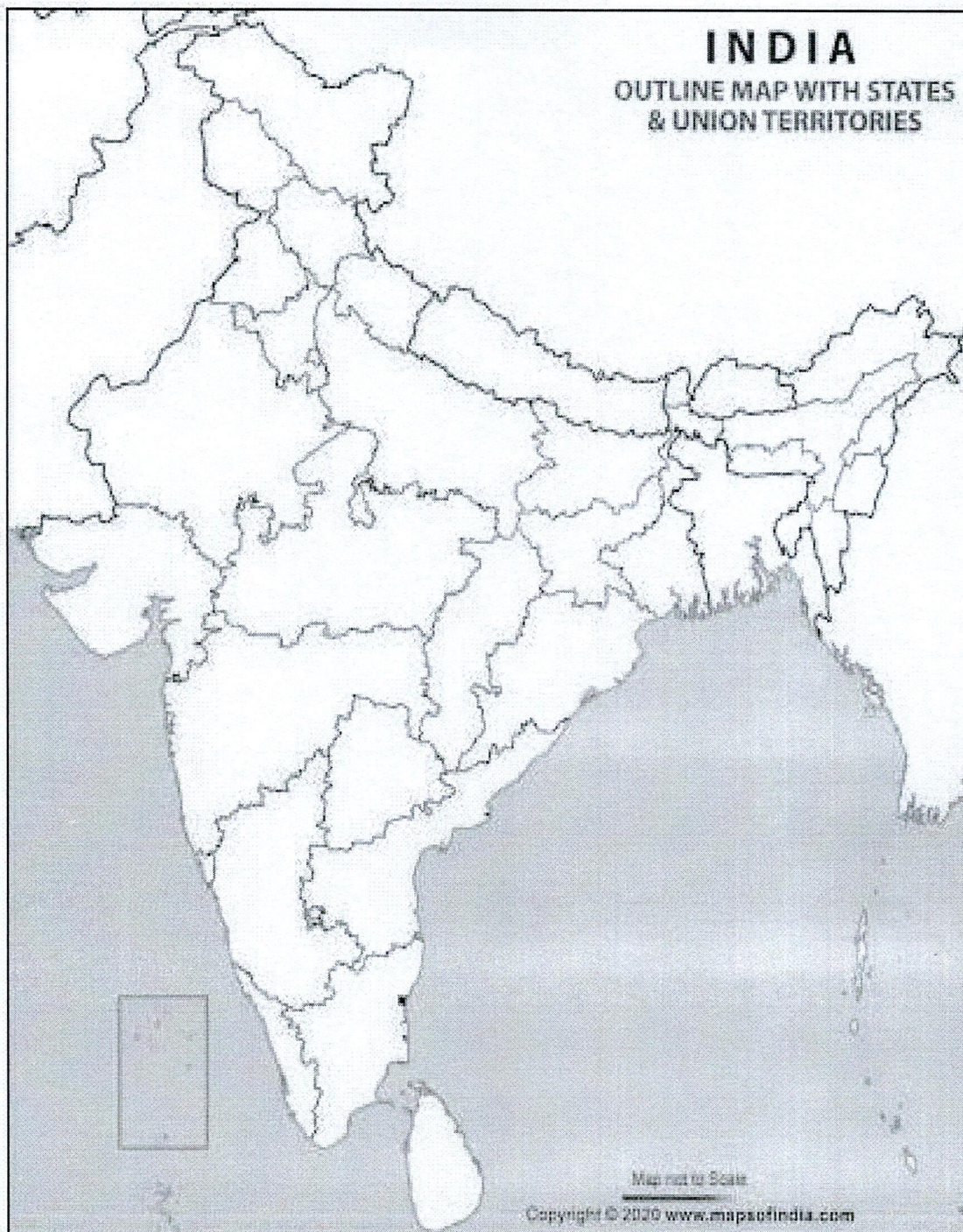
THE WORLD - POLITICAL

SCALE

Kms.0   2000   4000   6000 Kms.

Projection : Mercator.

A.
B.
C.
D.
E.
F.
G.

INDIA
OUTLINE MAP WITH STATES
& UNION TERRITORIES

Map not to Scale

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DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII
Time – 3 Hours

Subject – Psychology
Maximum Marks- 80

General instructions

- All questions are compulsory except where internal choice has been given. Question Nos. 1 - 15 in Section A carry 1 mark each.
- You are expected to answer them as directed.
- Question Nos. 16-21 in Section B are very short answer type-I questions carrying 2 marks each. Answer to each question should not exceed 40 words.
- Question Nos. 22-24 in Section C are short answer type-II questions carrying 3 marks each. Answer to each question should not exceed 80 words.
- Question Nos. 25 – 28 in Section D are long answer type – I questions carrying 4 marks each. Answer to each question should not exceed 200 words.
- Question Nos. 29-30 in Section E are long answer type – II questions carrying 6 marks each. Answer to each question should not exceed 300 words.
- Question Nos. 31 – 34 in Section F are based on two cases given. Answer to each 1 mark question should not exceed 20 words. Answer to each 2 marks question should not exceed 30 words.

SECTION -A

Objective question.

1. Anxiety disorders are linked to low activity of the neurotransmitters............
   a. Dopamine
   b. GABA
   c. Serotonin
   d. B cell

2. .... Emphasized psychological conflicts and disturbed interpersonal relationship as causes of psychological disorder.
   a. St. Augustine
   b. Plato
   c. Galen
   d. Johann weyer

3. Repetitive speech, communication problems and a strong desire for routine are typical symptoms of..............
   a. ODD
   b. ADHD
   c. Autism spectrum disorder
   d. PTSD

4. .... placed emphassis on providing community care for recovered mentally ill individuals .
   a. Faith And dogma
   b. Renaissance period
   c. Johann weyer
   d. Deinstitutionalisation

5. Malvika's mother ignores when she throws tantrums if asked to keep her room neat and tidy. However she appreciates malvika when she arrange her toy after play time. Which of the following method is being used here by her mother?
   a. Negative reinforcement
   b. Positive reinforcement
   c. Differential conditioning
   d. Token economy

6. Anuj has been suffering form PTSD symptoms for last 2 years. Alone with the psychotherapy her therapist recommends some alternative therapy also. Which type of alternative therapy is the most suitable for her.
    a. Kundalini yoga
    b. Vipassana meditation
    c. Sudarshan kriya yoga
    d. Herbal remedy

7. Learning by observing other, is used through a process of rewarding small changes in the behaviour...,.........
    a. Vicarious learning
    b. Modelling
    c. Token economy
    d. Aversive conditioning

8. Sahana is in a rehabilitation Centre. The aim of rehabilitation is to empower her to become self sufficient. .... Is given to her, wherein she is helped to gain skills necessary to Undertake productive employment.
    a. Cognitive retraining
    b. Social skills training
    c. Vocational training
    d. Occupational therapy

9. Shelly thinks that since there are some rumours being spared about a particular community, there must be some truth in it. The community that is being blamed is the minority in her country. This thinking is due to
    a. Scapegoating
    b. In group bias
    c. Kernel of truth
    d. Self fulfilling prophecy

10. 'my best friend lives near my house and send I meet her everyday she is close to me' which condition of group formation is reflected through this line?
    a. Similarity
    b. Proximity
    c. Status
    d. Security

Directions (Question no. 11,12 ,13) each of these questions contains two statements, Assertion (A) and Reason (R) . Each of these questions also has four alternative choices, any one of which is the correct answer. You have to select one of the codes (a)(b)(c)(d) given below.

11. **Assertion** (A) people from groups with people who are similar to them in their view points and interests
    Reason (R) people prefer consistency and like relationship that are Consistent
    a. Both A and R are true and R is the correct explanation of A.
    b. Both A&R are true but R is not the correct explanation of A.
    c. A is true but R is false.
    d. A is false and R is true.

12. **Assertion (A)** according to 'Two step concept 'two elements of an attitude system must be in the same direction.
    Reason (R) an attitude system requires logical consistency else it will lead to 'mental discomfort'.
    a. Both A & R are true and R is the correct explanation of A
    b. Both A & R true but R is not the correct explanation of A
    c. A true but R is false.
    d. A is false and R is true.

13. **Assertion (A)** if your class teacher embarrasses you for asking a question in class, it is less likely that you would ask questions in class in future.
    Reason (R) negative reinforcement reduce the occurrence of a behaviour.
    a. Both A &R are true and R is the correct explanation of A.
    b. Both A&R are true but R is not the correct explanation of A.
    c. A true but R false.
    d. A false but R true.

14. **Assertion (A)** A classification of disorders consists of a list of categories of specific psychological disorders grouped into various classes on the basis of some shared characteristics.

Reason(R) classifications are useful because they enable user like psychologist, psychiatrist and social workers to communicate with each others about the disorder that help in understanding the causes of psychological disorders and the process involved in the development and maintenance

   a. Both A &R are true and R is the correct explanation of A.
   b. Both A&R are true but R is not the correct explanation of A.
   c. A true but R false
   d. A false but R true.

15. During the covid-19 pandemic, our society has witnessed many deplorable instances of discrimination, with prejudice.if you device a plan to handle prejudice, it will include...............
   a. Minimising opportunities for learning prejudice
   b. Changing such attitudes
   c. De-emphasising a narrow social identity based on the in group
   d. All of the above

SECTION-B

Very short question.

16. Rehana on being left alone becomes very upset, overly clingy, has problems falling asleep and does not want to go to school. Identify the disorder and explain.

17. Explain bipolar mood disorder.

18. Explain negative reinforcement and aversive conditioningtechniques of behaviour modification with examples.

19. What is the meaning of logotherapy?

20. What is social faciliation?

21. Differential between an audience and a mob.

SECTION -C

Short Type question

22. Nikhil is a 14 years old male with a history of intimidateding, bullying a and physical harming others, aggressive and destructive behaviour, laying skipping school, running away from home since a very young age. Identify the disorder and explain its feature.

23. Discuss the various techniques used in behaviour therapy to eliminate faulty behaviour.

24. Mary found herself very lonely when she joined a new college, but soon felt ease when she made friends and become a member of a 'hobby group' too. With the help of this example, discuss the conditions that lead to group formation.

OR

Is behaviour always a reflection of one s attitude? Explain with the help of suitable examples?

SECTION -D

Long type question-1

25. "Ankita is a 18 years old girl who believe that human Misery is caused by the external events over which one does not have any control and feels that she is an ugly girl who is not wanted and loved by anyone" which therapy do you think would hear the most in such condition.

26. There are many instance to show how prejudice can lead hatred and discrimination. Discuss any four sources leading to these prejudice.

27. What are the factors that influence the formation of an attitude?

28. A teacher 'X' found at the project that she/he gave to a group of students, when submitted to her/him, lacked quality as compared to the ones submitted by individual students. What is the reason for this phenomenon and how can it the reduced? Discuss.

OR

What you understand by the term "dissociation" ? Describe the silent feature of anyone from of dissociative disorder.

SECTION -E

Long type question- 2

29. Anxiety has been called the "butterflies in the stomach felling ". At what stage does anxiety become a disorder? Discuss its type.

30. Describe the nature scope and goal of psychotherapy. Highlight the importance of therapeutic relationship in psychotherapy.

OR

What are the factors that contribute to healing in psychotherapy? Enumerate some of the alternative therapies.

SECTION -F

Case Based questions 1
Read the case and answer the question that follow .

In contemporary society, we she examples of group polarization growing day by day, in terms of politics, sports team, and civic Pride. Also known as the normative influence, this theory of group polarization states that people often change their opinions when in a group in order to fit in or to be accepted and to be looked upon more favourably. As Outsiders, new members of the group may promote a more extreme view of a topic than the rest of the group previously had. That can push the entire group towards the more extreme viewpoints or the stance that best correlates with the views of the group leader. Sometimes bad decisions are made by a group which are not in the group's interest because some of its members don't want to express opinions or suggest new ideas that some in the group may disagree with.

31. What is group polarization ?

32. Extreme and bad discussions are made by the group which are not in the groups interest what is the process called? Who discovered this process?

Case Based questions 2
Read the case and answer the question that follow .

Mr. Shyam and his group has won the election from his constituency against Mr. Ram and his group. Mr. Ram group is in minority and is to week to defend himself. Often Mr. Shyam place The blame on Mr. Ram for all the social, economic and political problems. Mr. Ram is too week to defend himself against such accusations. Also Mr. Shyam express frustration and aggression and has developed negative attitude towards Mr. Ram and is very prejudiced against him

33. Name the phenomenon which is being talked about in the above case.

34. Define prejudice. What are the other sources of prejudice?

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD – II   (2024-25)

Class - XII   Subject – Physical Education
Time – 3 Hours   Maximum Marks - 70

GENERAL INSTRUCTIONS:-

a. The question paper consists of 5 sections and 37 Questions.

b. Section A consists of questions 1-18 carrying 1 mark each and is multiple choice question. All questions are compulsory.

c. Section B consist of questions 19-24 carrying 2 marks each and are very short answer types and should not exceed 60-90 words. Attempt any 5.

d. Section C consist of questions 25-30 carrying 3 marks each and are short answer type and should not exceed 100-150 words. Attempt any 5.

e. Section D consist of questions 31-33 carrying 4 marks each and are case studies.

f. Section E consist of question 34-37 carrying 5 marks each and are short answer types and should not exceed 200-300 words. Attempt any 3.

SECTION - A

1. Founders of Circuit Training was from which university?   (1)
   a. Howard University
   b. Leeds University
   c. Oxford University
   d. Cambridge University

2. How many trials will be given to the subject in Back Scratch Test?   (1)
   a. Three
   b. One
   c. Two
   d. None of the above

3. What is the other name of Folic Acid?   (1)
   a. Vitamin B5
   b. Vitamin B6
   c. Vitamin B3
   d. Vitamin B9

4. In which type of diabetes injection of insulin is required on daily basis for its treatment?   (1)
   a. Type I
   b. Type II
   c. Both 'a' & 'b'
   d. None of the above

5. The amount of air which an individual can inhale and exhale with maximum effort is known as _____. (1)
   a. Vital Air Capacity
   b. Tidal Air Capacity
   c. Residual Air Volume
   d. None of the above

6. Taking sprint start from blocks is an example of which class of lever:- (1)
   a. First Class
   b. Second Class
   c. Third Class
   d. Fourth Class

7. Which type of personality has great risk of premature death and they usually lead a poor quality of life? (1)
   a. Type C
   b. Type B
   c. Type D
   d. Type A

8. How many points will be awarded to the loser of the match in League Tournament? (1)
   a. 3
   b. 2
   c. 1
   d. 0

9. The first winter Paralympic game was held in which year? (1)
   a.1960
   b. 1976
   c. 1981
   d. 1984

10. Identify the image given below:- (1)
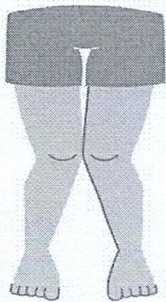
   a. Genu -Varum
   b. Pes-Planus
   c. Hunchback
   d. Genu-Valgum

11. Which one of these fracture is commonly occur in the long bones of our body. i.e., Femur & Humerus Bone. (1)
    a. Impacted Fracture
    b. Simple Fracture
    c. Oblique Fracture
    d. Transverse Fracture

12. F 11-13 Category comes under which type of impairment in Paralympic Games of Athletics?(1)
    a. Visual Impairment
    b. Intellectual Impairment
    c. Leg Impairment
    d. All of the above

13. Identify the yogic asana given below:- (1)

    a. Paschimottanasana
    b. Supta Vajrasana
    c. Gomukhasana
    d. None of the above

14. Given below are two statements, labelled as Assertion (A) and reason (R). (1)
    Assertion (A): Basal Metabolic Rate (BMR) is the minimum number of calories a person needs to sustain his basic life functions.
    Reason (R): Equations to calculate Basal Metabolic Rate (BMR) was created by Harris & Benedict and Mifflin – St Jeor.
        In the context of the above two statements, which one of the following is correct.
    a) Both A and R are true and R is the correct explanation of A
    b) Both A and R are true, but R is not the correct explanation of A
    c) A is true but R is false
    d) A is false but R is true

15. "The Drive to strive" is called Motivation. This definition was propounded by whom? (1)
    a. Crooks
    b. Stein
    c. Alderman
    d. Sage

16. In which Year Isokinetic exercise was developed? (1)
    a. 1948
    b. 1958
    c. 1968
    d. 1978

17. Fats contain Carbon, Hydrogen and Oxygen in the percentage of _____. (1)
    a. 50,25 & 25
    b. 76, 12 &12
    c. 80, 10 &10
    d. 70, 15 &15

18. Which one of these is the heart of management function. (1)
    a. Directing
    b. Planning
    c. Organising
    d. Staffing

SECTION –B

19. Define Acceleration Run and Pace Run? (2)

20. Explain any two dimensions of Personality? (2)

21. Write the full form of PRICE and MICE? (2)

22. Write short note on Deaflympics? (2)

23. Explain the procedure of Vakrasana? (2)

24. Define Test & Measurement? (2)

SECTION –C

25. Explain any two of the following:- (3)
    a. Health Run
    b. Run for Unity
    c. Run for Fun

26. Define Macrocycle, Mesocycle &Microcycle? (3)

27. Explain Jung's classification of personality in detail? (3)

28. Explain any six needs of Inclusive Education in India? (3)

29. Explain any six causes of Sports Injuries? (3)

30. Define Female athlete Triad in detail? (3)

SECTION –D

31. On the basis of the picture given below, answer the following question:- (4)

4
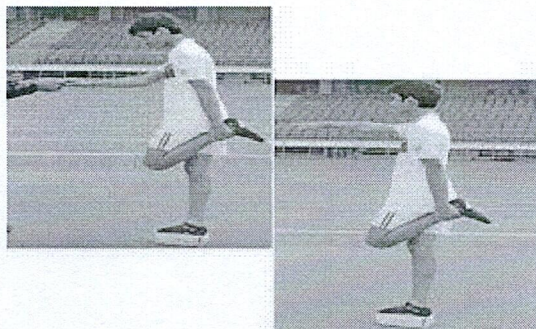
.1. What is the primary focus of the test depicted in the image?
   a. Flexibility
   b. Endurance
   c. Strength
   d. Stability

2. Which factor is crucial for the success of the test given in the image?
   a. Speed
   b. Agility
   c. Coordination
   d. Strength

3. For what duration is the test conducted?
   a. 30 Sec.
   b. 60 Sec.
   c. 10 Sec.
   d. 20 Sec.

4. Which anatomical alignment is essential for optimal performance in this test?
   a. Vertical
   b. Diagonal
   c. Inclined
   d. Horizontal

32. On the basis of the picture given below, answer the following question:-   (4)
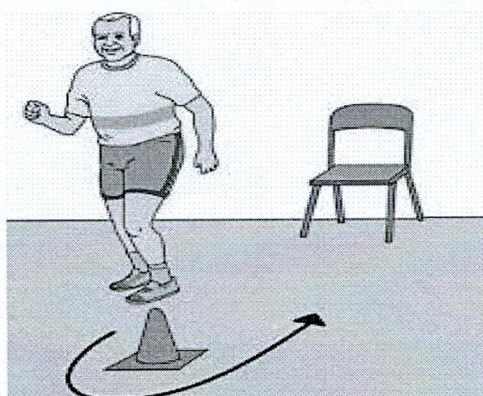
1. What test is being conducted in the figure?
   a. Eight Foot Up and Go Test
   b. Nine Foot Up and Go Test
   c. Timed Up and Go Test
   d. Gait Speed Test

2. What is the primary focus of the test depicted in the image?
   a. Assessing Muscle Strength
   b. Measuring Functional Mobility
   c. Testing Flexibility
   d. Evaluating Aerobic Capacity

3. Which of the following factors can influence the results of the test given above:-
   a. Chair Placement
   b. Floor Surface Texture
   c. Participant Motivation
   d. Room Temperature

4. What is the test duration of the above mentioned picture:-
   a. 15 Sec.
   b. 20 Sec.
   c. 30 Sec.
   d. None of the above

33. On the basis of the picture given below, answer the following question:- (4)
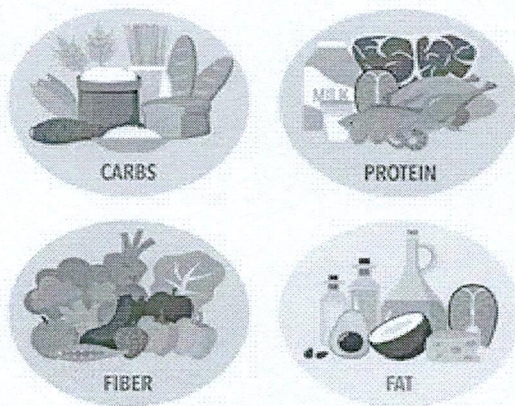
1. What type of macronutrient is primarily involved in muscle repair?
   a. Carbohydrates
   b. Minerals
   c. Fats
   d. Proteins

2. What type of fat is typically considered unhealthy and linked to cardiovascular disease?
   a. Saturated
   b. Unsaturated
   c. Polyunsaturated
   d. Monounsaturated

3. What type of carbohydrate is stored in the liver and muscles for energy?
   a. Glucose
   b. Sucrose
   c. Glycogen
   d. Fructose

4. What is the term for the process of converting fats into energy?
   a. Glycolysis
   b. Lipolysis
   c. Proteolysis
   d. Gluconeogenesis

SECTION –E

34. Draw a fixture of 17 teams on the basis of knock-out tournament? (5)
35. Define Coordinative ability and explain any four types. (5)
36. Explain the techniques of motivation in detail? (5)
37. Explain the effect of exercise on Cardio-Respiratory system? (5)

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII   Subject – Economics
Time – 3 Hours   Maximum Marks- 80

General Instructions

i. This Question Paper contains two parts:
- **Part A – Macro Economics (40 marks)**
- **Part B – Indian Economic Development (40 marks)**

ii. Question No. 1 – 10 and 18-27 are very short answer questions carrying 1 mark each. They are required to be answered in one word or one sentence each.

iii. Question No. 11-12 and 28-29 are short answer questions carrying 3 marks each. Answers to them should not normally exceed 60 - 80 words each.

iv. Question No. 13-15 and 30-32 are short answer questions carrying 4 marks each. Answers to them should not normally exceed 80 - 100 words each.

v. Question No. 16–17 and 33-34 are long answer questions carrying 6 marks each. Answers to them should not normally exceed 100-150 words each.

SECTION -A
MACRO ECONOMICS

1. Read the following statements, Assertion (A) and Reason(R). Choose the correct option from those given below:

   Assertion (A): Deficient demand in an economy is solely caused by a decrease in propensity to consume.

   Reason (R): Practices such as higher taxes, reduced government expenditure, lower investment, increased imports and decreased exports collectively contribute to a decrease in aggregate demand, leading to deficient demand in the economy.

   Alternatives:
   (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
   (b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
   (c) Assertion is true but Reason is false.
   (d) Assertion is false but Reason is true.   [1]

2. What are the main sources of financing revenue deficit for the Indian economy?
   (a) Borrowings.
   (b) Deficit financing.
   (c) Both (a) and (b).
   (d) None of the above.   [1]

3. If the Gross Domestic Product at Factor Cost (GDP FC) of a country is Rs 500 billion and the Net Factor Income from Abroad (NFIA) is Rs 50 billion. What is the Gross National Product at Factor Cost (GNP FC)?
   (a) Rs 450 billion.
   (b) Rs 550 billion.
   (c) Rs 500 billion.
   (d) Rs 50 billion.   [1]

4. 'Owing to the Russia-Ukraine crisis, the world is experiencing rising crude prices due to supply-side issues.'
   Identify the most likely impact on the Balance of Payment situation of the Indian economy from the following.
   (a) Production of cars in India will rise.
   (b) Production and sale of cycles in India will rise.
   (c) Inflow of US Dollars in India will rise.
   (d) Outflow of US Dollars from India will rise.   [1]

5. Based on the diagram below what does the point of intersection between aggregate demand and aggregate supply curves represent?
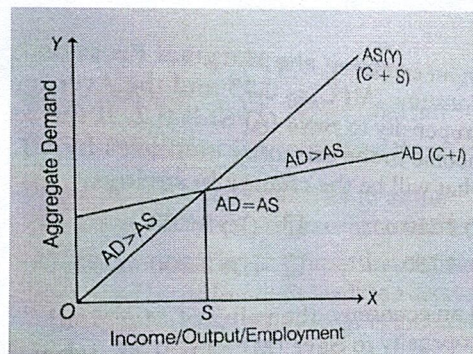
   (a) Equilibrium level of income and output.
   (b) Full employment level of income.
   (c) Cyclical unemployment.
   (d) Recessionary gap.   [1]

6. Repayment of borrowing is a _____expenditure, whereas interest paid on borrowings is _____ expenditure.   [1]
   (a) Revenue, Capital.
   (b) Capital, Revenue.
   (c) Revenue, Revenue.
   (d) Capital, Capital.

7. Read the following statements carefully:-
   Statement 1: Aggregate supply (AS) refers to the actual output of goods and services produced in an economy during a given time period.
   Statement 2: National income (Y) is calculated as a sum of consumption expenditure (C) and investment (I) where consumption (C) represents the expenditure on goods and services by households and investment (I) represents the expenditure on capital goods by businesses.   [1]
        In the light of the given statements choose the correct option from the following:
   (a) Both the statements are correct
   (b) Both the statements are incorrect.
   (c) Statement 1 is true, statement 2 is false.
   (d) Statement 2 is true, statement 1 is false.

8. Which of the statements is not true in case of underemployment equilibrium?
   (a) Aggregate supply is equal to the aggregate demand.
   (b) The resources are fully utilized in an efficient manner.
   (c) The resources are not fully utilized in an efficient manner.
   (d) There is an existence of an excessive production capacity in the economy. [1]

9. Read the following statements carefully:-
   Statement 1: Recovery of loans is a non debt creating capital receipts.
   Statement 2: Recovery of loans causes a reduction in assets of the government.
             In the light of the given statements choose the correct option from the following:
   (a) Statement 1 is true and statement 2 is false.
   (b) Statement 1 is false and statement 2 is true.
   (c) Both the statements are true .
   (d) Both the statements are false. [1]

10.

Outflow of forex(Debit)	Rs in crore	Inflow of forex(Credit)	Rs in crore
1.Import of goods	4,000	1.Export of goods	6,000
2.Import of services	9,000	2.Export of services	2,000
3.Unilateral transfers to rest of the world	700	3.Unilateral transfers received from the rest of the world.	2,000
4.long term lendings	2,000	4.Long term borrowings	2,000
5.Capital payments	3,000	5.Capital receipts	6,700
Total Payments	18,700	Total Assets	18,700

On the basis of the above mentioned information answer the following question:
The Value of capital account balance for the above data of a hypothetical economy is
(a) Rs 3,700 crore   (b) Rs 6,700crore   (c) Rs 300crore   (d) Rs 2,800crore

11. (a). Find Net Value Added at Market Price. [3]

Items	Rs (in crores)
Output sold (units)	800
Price per unit of output	20
Excise	1,600
Import Duty	400
Net change in stock	(-)500
Depreciation	1,000
Intermediate cost	8,000

OR

(b) Define GDP deflator and discuss its importance. [3]

3

.12. Study the given picture carefully:

Sources of State and Local Government Tax
Revenues for a Financial Year
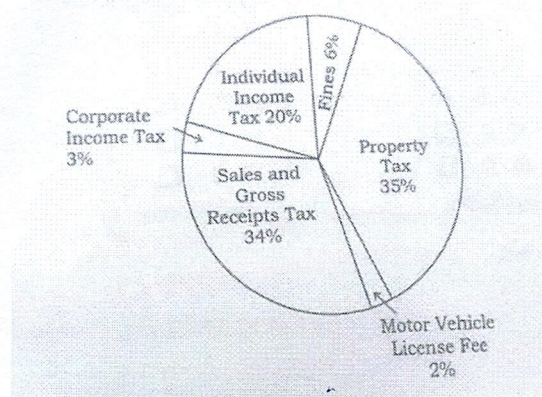
Answer the following question based on the common knowledge and the above picture [1+2]
(i) Categorize the given items in the picture into tax and non-tax receipts.
(ii) Find Primary Deficit from the following information:-

Particulars	(Rs in crore)
(i) Revenue Expenditure	70,000
(ii) Borrowings	15,000
(iii) Revenue Receipts	50,000
(iv) Interest Payments	25% of Revenue Deficit

13. (a) Unfavourable BOT can be met out of favourable BOP, but unfavourable BOP cannot be met out of favourable BOT.-Comment . [2]
    (b) To cover the current account deficit Government has withdrawn money from its foreign exchange reserve .Which side and under which account will it be recorded in BOP? [2]

14. In the Government of India's budget for the year 2013-14, the Finance Minister proposed to raise the Goods and Services Tax (GST) on cigarettes. He also proposed to increase income tax on individual earning more than Rupee one crore per annum.
    (a) Identify and explain the types of taxes proposed by the Finance Minister. [1]
    (b) Was the objective only to earn revenue for the government? What possible welfare objectives could the government be considering? [3]

15. Define excess demand and elaborate the possible impact of excess demand on the level of output, employment and income. [4]

16. **Read the following text carefully. Answer the questions given below:-**
Banking sector challenges:
The banking sector in India is facing several challenges that impact its stability and growth. XYZ Bank,one of the leading private banks in India is grappling with rising Non-performing assets (NPAs) due to economic slowdowns and loan defaults by borrowers.
The bank's balance sheet has been adversely affected, leading to concerns among shareholders and regulators. In addition to NPAs, XYZ Bank is facing intense competition from both traditional and emerging players in the banking industry.
Fintech companies and digital payment platforms are disrupting the market with innovative products and services,posing a threat to traditional banking business models.

4

Moreover, regulatory compliance and governance issues have surfaced within XYZ bank, leading to reputational risk and legal challenges. The bank is under scrutiny from regulatory authorities for alleged violations of banking regulations and corporate governance norms. To address these challenges, XYZ bank is undergoing a transformation process aimed at strengthening the risk management practices, enhancing customer experience and embracing digital technology. The bank is investing in advanced analytics and artificial intelligence to improve credit risk assessments and streamline operations. However, the bank must navigate regulatory hardware restore investor confidence and rebuild its reputation amidst growing competition and changing market dynamics.

(i) XYZ bank with the legal reserve ratio of 10% receives initial deposits of Rs.1000. Calculate the potential increase in the money supply through the bank's lending activities.
[2]

(ii) "The banking sector in india is facing several challenges that impact its stability and growth." Discuss .
[4]

17. (a) (i) Suppose only one good 'X' is produced in the country.
Output of good 'X' during the year 2018 and 2019 were 100 units and 110 units respectively. The market price of the product during the two was rupees Rs.50 and Rs.55 per unit respectively. Calculate the percentage change in Real Gross Domestic Product in year 2019 using 2018 as the base year.
[3]

(ii) "Disposition phase of circular flow of income involves flow of factor income, which comprises of rent, wages, interest and profits from firms to households."
Defend or refute the statement, giving valid reasons in support of your answer.
[3]

OR

(b) (i) The good which is used by a producer in the production process, is a producer good, then how can you categorize the good into intermediate and capital good?
[3]

(ii) The following headline is indicated in the newspaper:
India's GDP growth picked at 7.3% for F.Y 2024 as per the governments first advance estimate. Do you think that the welfare in the economy will also increase by the same rate? Justify.
[3]

SECTION - B

INDIAN ECONOMIC DEVELOPMENT

18. Mini hydel plants are good for the environment because:
[1]
(i) They generate electricity only for local areas.
(ii) They do not change the land use pattern.
(iii) They rely on the perennial streams.
Codes
(a) (i) ,(ii) ,(iii) .
(b) (ii) and (iii) .
(c) Only (i) .
(d) (i) and (ii) .

19. **Read the following statements carefully:**

    Statement 1: On the eve of independence, water and airborne diseases were rampant and took a huge toll on life.

    Statement 2: Extensive poverty prevailed in India during the colonial period which contributed to the worsening profile of India's population of the time.

    In the light of the given statement choose the correct option from the following:
    (a) Both the statements are true.
    (b) Both the statements are false.
    (c) Statement 1 is true and Statement 2 is false.
    (d) Statement 1 is false and Statement 2 is true. [1]

20. Read the following statements Assertion (A) and Reason (R).Choose the correct option from those given below: [1]

    Assertion (A): The economy is in the need for expanding educational opportunities as it accelerates the development process.

    Reason (R): Labor skill of an educated person is more than that of an uneducated person and hence the former is able to generate more income than the letter and his or her contribution to economic growth is consequently more.

    Alternatives:
    (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
    (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
    (c) Assertion is true but Reason is false.
    (d) Assertion is false but Reason is true.

21. It is important to ensure that the benefits of economic prosperity reach the poor sections as well instead of being enjoyed only by the rich.This is the objective of _____ goal of the five year plan. [1]
    (a) Growth   (b) Modernization.
    (c) Self reliance   (d) Equity.

22. Which institutions logo is depicted in the image below? [1]

    (a) National Bank for Agriculture and Rural Development (NABARD).
    (b) Commercial bank.
    (c) Regional Rural Bank(RRB).
    (d) Land development bank.

23. Identify the correct statement in context of liberalization policy. [1]
    (a) Regulation of industrial licensing under which every entrepreneur had to get permission from government officials to start a firm, close a firm or to decide the amount of goods that could be produced.
    (b) Private sector was not allowed in many industries.
    (c) Goods which could be produced only in small sector industries were de-reserved.
    (d) Controls on price fixation and distribution of selected industrial products.

6

24. _____and _____ are the reasons for in the slowdown of the pakistan economy since independence.
I. Political instability.
II. Over dependence on remittances from abroad.
III. Stable performance of agriculture sector.
IV. Growth of service sector. [1]
Codes:
(a) I and II   (b) II and III   (c) III and IV   (d) I and IV

25. In context of the following picture choose the correct option.
The _____ movement aimed at protecting forests in the Himalayas. On 8th September,1983, when the felling of trees was started in Salkani forest in Sirsi district 160 men women and children _____ and forced the woodcutters to leave. [1]
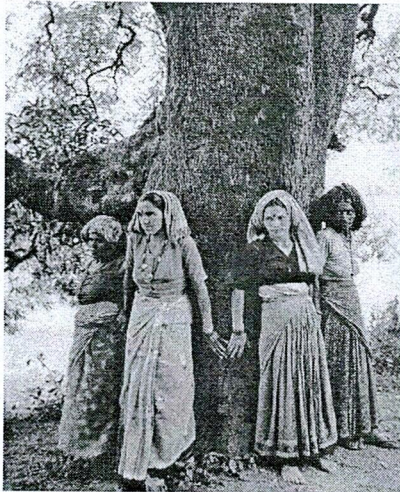
(a) Chipko ,hugged the trees.
(b) Appiko, planted the saplings.
(c) Van Mahotsav , protested.
(d) Green Revolution , demonstrated.

26. The informal sector includes enterprises and workers without regular income, government protection or regulation.
Workers can be dismissed without compensation. The economic reforms of 1991 led to many workers being dismissed from the formal sector and moving to the informal sector, increasing the rate of informalization.
What was a significant consequence of the economic reforms of 1991 on employment?
(a) Increase in government protection for informal sector workers.
(b) Rise in informalization due to formal sector dismissals.
(c) Improvement in job security in the informal sector
(d) Decrease in informal sector employment. [1]

27. The scheme of 'micro finance' is extended through _____ credit provision.
(a) Self help groups
(b) Land development banks
(c) Regional rural banks
(d) Commercial banks [1]

28. (a) "In the post reform period the Government of India decided to retain profit making Public Sector Undertakings.It provided a special status to PSUs to enable them to expand in the global market."Do you agree with the given statement? Give valid reasons in support of your answer. [3]

OR

(b) Discuss about the changes introduced in the financial sector under the New Economic Policy (1991). [3]

29. Compare and analyze the given data of India and China, with valid reasons. [3]

Country	Annual Growth Rate of Population(2015)	Gender ratio (Per thousand males)
India	1.2%	929
China	0.5%	941

30."India and Pakistan have followed many similar strategies in their respective development plans." Justify the above statement. [4]

31. (a) Interpret the following picture on account of the dichotomy of environmental degradation in India. [4]
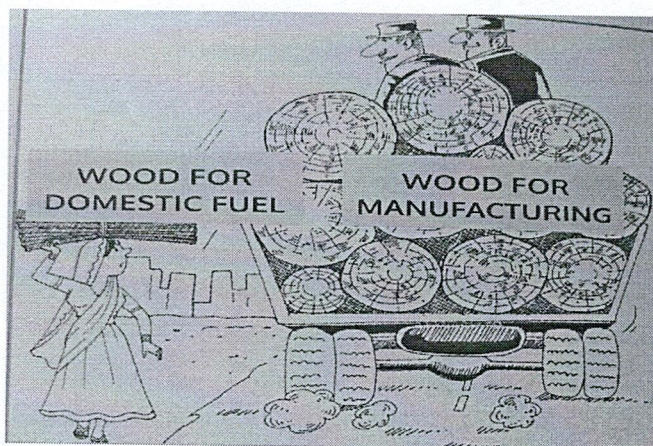
OR

(b) As a student Of class XII,you must have drawn your plans of acquiring some specialized skills; may be as an economist or sociologist. How do you think your education would become a productive resource? Do you think benefits of education would exceed the cost of education? Write your observations.

32. (i) What role do the group highlighted in the image plays in promoting economic empowerment among rural communities ? [3]

(ii) Write the names of two non institutional sources of rural credit. [1]

33. Read the following case study carefully and on the basis of this answer the questions given below:

The onset of COVID-19 pandemic saw unemployment climbed to the highest rate since the Great Depression in many regions globally. Over just one month, from March to April 2020 unemployment rate in the United States increased from 4.4% to over 14.7% and in Australia the effective rate of unemployment increase from 5.4 to 11.7%. In Australia, a number of economic responses were rapidly introduced including a wage subsidy scheme (Job keeper)to enable employers to keep their employees connected to the workforce,one-off payments to many welfare recipients, and the doubling of the usual rate of the unemployment benefits (Jobseeker payment) through a new Coronavirus supplement payment.

On the basis of the given text and common understanding and answer the following questions:

(i) State the two types of unemployment found in rural India. [2]

(ii) Why is the participation rate of female workers low in urban areas compared to that of rural areas? [3]

(iii) Define jobless growth. [1]

34. **(a)** (i) "Goals of equity was fully served by abolition of intermediaries in agriculture in the post independence period of India."
Do you agree with the given statement? Support your answer with valid arguments. [4]

(ii) Discuss the rationale behind the goal of Self-reliance in Indian planning. [2]

OR

(b) (i)" The railways affected the structure of Indian economy positively, as well as negatively." Do you agree? [3]

(ii) "The preindependent India's occupational structure experience growing regional variation."
Justify the above statement with valid explanation. [3]

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP,RANCHI
PRE BOARD – II (2024-25)

Class - XII	Subject – Biology
Time – 3 Hours	Maximum Marks - 70

(i) All questions are compulsory.
(ii) The question paper has five sections and 33 questions.
(iii) Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section– C has 7 questions of 3 marks each; Section– D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.
(iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
(v) Wherever necessary, neat and properly labeled diagrams should be drawn.

SECTION-A

Q. No. 1 to 12 are multiple choice questions. Only one of the choices is correct. Select and write the correct choice as well as the answer to these questions.

Q.NO.	Questions	Marks
1.	Following is the schematic outline for Hormonal control of female reproductive system. It is clinically observed that intervention of B or C hormone or combined B & C lead to inhibition of A. Select the correct option. (a) A is LH/FSH where as B and C are Estrogen and Progesterone, supply of B & C lead into +Ve Feedback mechanism. (b) A is LH/FSH where as B and C are Estrogen and Progesterone, supply of B & C lead into -Ve Feedback mechanism. (c) A is LH/FSH where as B and C are Estrogen and Progesterone, supply of A lead into +Ve Feedback mechanism. (d) A is estrogen/progesterone where as B and C are LH and FSH, supply of B & C lead into +Ve Feedback mechanism.	1

2.	The following diagram is of a terrestrial plant. Which of the given characteristics with respect to flower regarding pollination in this plant should be true?	1
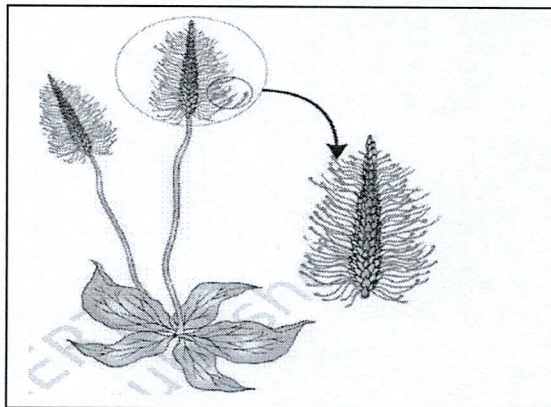
	Type of Pollination	Nature of Stigma & style	Nature of Stamen
(a)	Anemophily	Large, Feathery tassels or tassels like	Unexposed
(b)	Wind pollinated	Small, compact and unexposed e.g. tassels of corn cob.	well-exposed stamens so that the pollens are easily dispersed into wind currents
(c)	Air pollination	stigma and style which wave in the wind to trap pollen grains	pollen grains are heavy and sticky so that they can be transported in wind currents
(d)	Wind pollination	large often-feathery stigma to easily trap air-borne pollen grains	well-exposed stamens, pollen grains are light and non-sticky.

3	A gene is defined as the functional unit of inheritance. Though there is no ambiguity that the genes are located on the DNA, it is difficult to literally define a gene in terms of DNA sequence. Following are some statements regarding Gene. P: The DNA sequence coding for tRNA or rRNA molecule also define a gene. Q: Segment of DNA that can synthesis a complete protein is called gene. R: Any transcriptive sequence of DNA from which RNA can synthesise is called gene. S: segment of DNA coding for a polypeptide is called cistron Based on the statements, select correct option. (a) P and R are true and R is the reason for P. (b) Qand S are true and S is the reason for Q. (c) R and S are true and S is the reason for R. (d) Both a & b	1

4	The paternity of a child is in dispute. A DNA finger print was constructed for the child and the mother. DNA finger prints from samples taken from 4 possible fathers are constructed. Based on the information in the diagram provided, state which male is most likely to be the child's father?	1
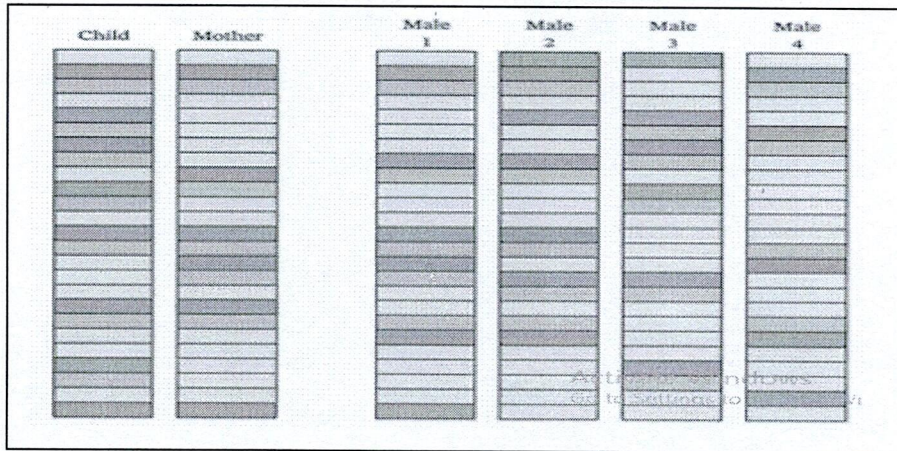
(a) Male -1, as 100% matching with child.
(b) Male -2, as 50% matching with child but not mother
(c) Male -3, as 50% matching with child
(d) Male – 4 just exact copy of child.

5	Several members of a family are found to involuntarily sneeze when exposed to bright lights, such as sunlight. Following analysis of the condition in the family, a doctor predicts that the symptoms have an underlying genetic basis. A pedigree of the family is shown in Figure, where family members with and without symptoms.	1
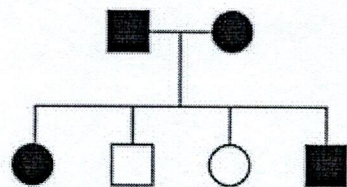
XX Individual ○   XY Individual □

No Affect of Light on Sneezing	□	○
Involuntary Sneezing when Exposed to Bright Lights	■	●

For this condition, which of the following modes of inheritance is most consistent with the observations?
(a) Autosomal dominant
(b) Autosomal recessive
(c) X-linked dominant
(d) X-linked recessive
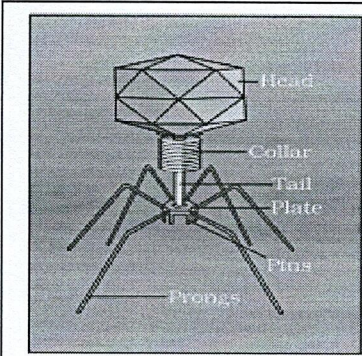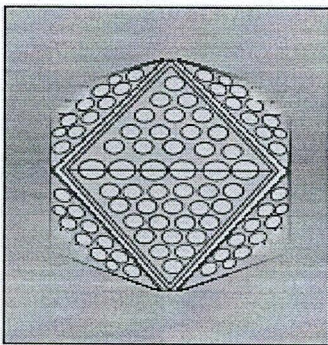
6	Contrast the regulatory mechanisms of the *lac* operon when lactose is present versus when it is absent. Which statement best describes their differences? (a) When lactose is present, the *lac* repressor binds to the operator, preventing transcription, while in the absence of lactose, the repressor is inactive and transcription occurs. (b) When lactose is present, the *lac* repressor is inactive and does not bind to the operator, allowing transcription, whereas in the absence of lactose, the repressor binds to the operator and blocks transcription. (c) When lactose is absent, the *lac* operon is continuously transcribed due to high levels of cAMP, while in the presence of lactose, cAMP levels drop and transcription is inhibited. (d) When lactose is present, the *lac* operon is repressed by the presence of glucose, while in the absence of glucose, the operon is always active regardless of lactose..	1
7	Match the terms in Column I with their description in Column II and choose the correct option:	1

	COLUMN-I		COLUMN-II
A.	Dominance	(I)	Many genes govern a single character
B.	Co dominance	(II)	In a heterozygous organism only one allele expresses itself
C.	Pleiotropy	(III)	In a heterozygous organism both alleles express themselves fully.
D.	Polygenic inheritance	(iv)	A single gene influences many characters

	A	B	C	D
(a)	(ii)	(iii)	(iv)	(i)
(b)	(iv)	(i)	(ii)	(iii)
(c)	(iv)	(iii)	(i)	(ii)
(d)	(ii)	(i)	(iv)	(iii)

8	If mRNA strand 5'-GUU CAU CUG ACC CCU GAG GAG-3' is the sequence responsible for the synthesis of normal lamina protein of RBCs before sickle cell anemia, what is the correct sequence of nucleotides for the non-template strand of the DNA that transcribed this mRNA. (a) 5'- CAA GTA GAC TGG GGA CTC CTC-3' (b) 3'- CAA GTA GAC TGG GGA CTC CTC-5' (c) 5'-GTT CAT CTG ACC CCT GAG GAG-3' (d) 3'-GTT CAT CTG ACC CCT GAG GAG-5'	1
9	Match the following list of Microbial sources and Bioactive molecules:	1

	Microbial agent		Bioactive molecule
I.	*Trichoderma polysporum*	(A)	CO_2
II.	*Monascus purpureus*	(B)	citric acid
III	*Streptococcus*	(C)	clot buster
IV	*Aspergillus niger*	(D)	Statins
V	*Propionibacterium sharmanii*	(E)	cyclosporin A

	A	B	C	D	E
(a)	II	III	IV	V	I
(b)	III	IV	V	I	II
(c)	IV	III	II	I	V
(d)	V	IV	III	II	I

| 10 | Following is A sketch of the evolution of plant forms through geological periods. | 1 |

Select possible common ancestor of Bryophyta and pteridophyta and common ancestor of Gymnosperm and angiosperm.

(a) Progymnosperm for Bryophytes and pteridophytes where as *Tracheophyte* is the common ancestor of Gymnosperm & angiosperm.

(b) *Psilophyton* for Bryophytes and pteridophytes where as Seed ferns is the common ancestor of Gymnosperm & angiosperm.

(c) *Chlorophyte* ancestor for Broyphytes & pteridophytes where as Rhynia type plants for Gymnosperm & angiosperm.

(d) Chlorophyte is the precursor of all plants.

| 11 | Plants, bacteria, fungi, and animals whose genes have been altered by manipulation are called Genetically Modified Organisms (GMOs). There are three basic steps in genetically modifying an organism. Out of the following four options, which one is NOT included in the basic steps for creating a GMO? | 1 |

(a) identification of DNA with desirable genes

(b) introduction of the identified DNA into the host

(c) maintenance sterility in the host and transfer germ free DNA to its progeny.

(d) maintenance of introduced DNA in the host and transfer of the DNA to its progeny.
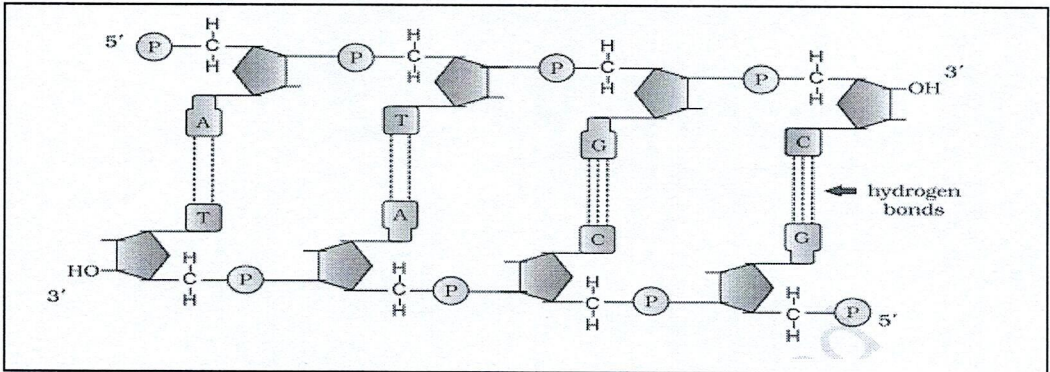
12	Find out incorrect statement(s) regarding relation of the following microbial agents:	1

I. Fig.A is Adenovirus and Fig.B is Bacteriophage virus.
II. Fig.A is the causative agent for Bacterial infection where as Fig.B is the causative agent for animal(mammalian) infection.
III. Fig.B is Icosahedral capsid structure without tail fibers of Adenovirus, causes respiratory illnesses, conjunctivitis, and gastroenteritis in humans.
IV. Fig.A is a Complex structure with a head (capsid) and tail fibers of Bacteriphage,act as a Biocontrol in agriculture, water treatment, and bacterial infections.
V. Fig.A contain genetical material as RNA or DNA but Fig.B contain genetic material as RNA only.

(a) I,II & IV   (b) I & V
(c) II,III & IV   (d) II & V

Question No. 13 to 16 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are true and R is not the correct explanation of A.

(c) A is true but R is false.

(d) A false but R is true.

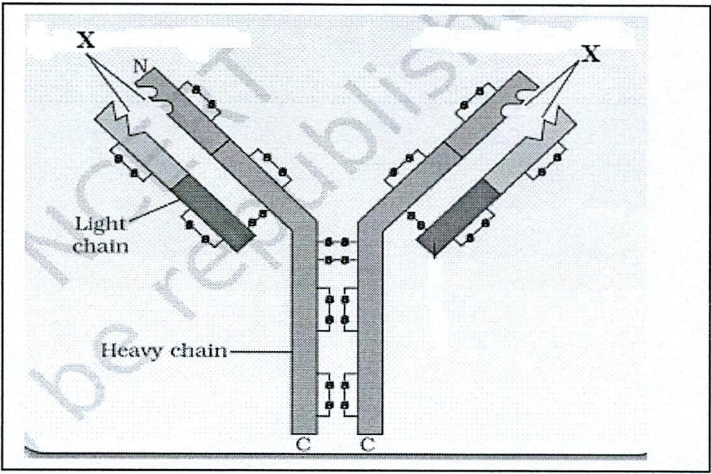| 13	**Assertion (A):** The microspores, as they are formed, are arranged in a cluster of four cells called the microspore tetrad. **Reason (R):** The microspores are immediately dispersed after formation without undergoing further development.	1
14	**Assertion (A):** Mendel conducted artificial pollination experiments for his genetic studies using many true breeding pea lines. **Reason (R):** A true breeding line shows the stable trait inheritance and expression for several generation.	1
15	**Assertion (A):** Baculoviruses are pathogens that attack insects and other arthropods. **Reason (R):** These viruses are species-specific, and helpful for narrow spectrum insecticidal applications..	1

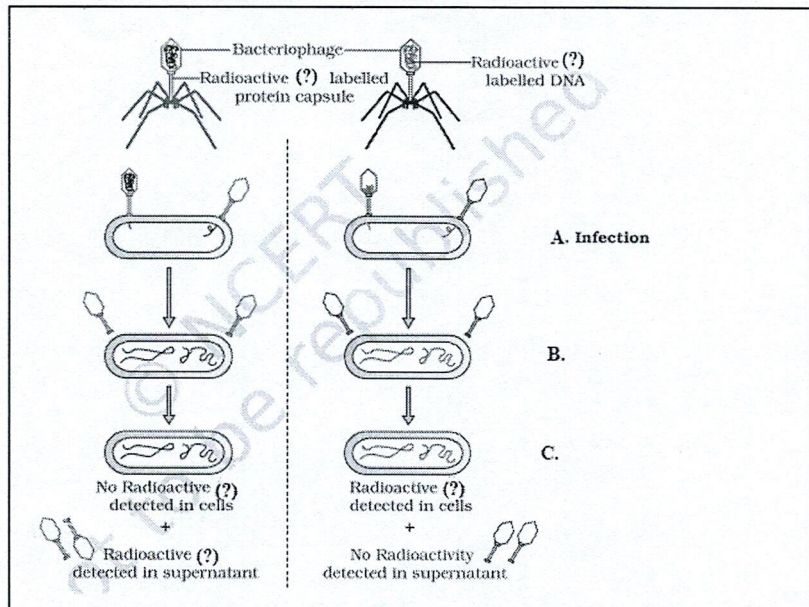| 16	**Assertion (A):** Restriction endonuclease functions by "inspecting" the length of a DNA sequence. **Reason (R):** Restriction endonucleases bind randomly to any DNA sequence and cut it at random locations.	1

SECTION- B

17	**Attempt either option A or B** A. The process of formation of a mature female gamete is called oogenesis which is very complicated and greatly different from spermatogenesis. During oogenesis female germ cell undergoes different stages of development of follicle. (i) Write the name of follicular stage at which primary oocyte complete the first meiosis. (ii) What are the identifying characteristics of above mention follicular stage. <center>**OR**</center>B. In testis, some of the spermatogonia called primary spermatocytes periodically undergo meiosis I & II during spermatogenesis. (i) Define spermiogenesis and mention the hormone which directly help in spermatogenesis and spermiogenesis. (ii) Write name of the stage of male germ cell when their head gets imbedded in sertoli cell.	2
18	A. "The proposition of a double helix structure for DNA and its simplicity in explaining the genetic implication became revolutionary". (a) Based on the above statement, mention any remarkable theory or revolutionary proposal given by the scientists. (b) How did Watson and Crick establish the stability of the helical configuration in the double helix structure of DNA? <center>**OR**</center>B. Following is the molecular arrangement of dsDNA, answer the question given below. (a) Why does the distance between the two polynucleotide chains in DNA remain almost constant? (b) What is the pitch of the DNA helix, and how many nitrogenous bases are present per turn of the helix?	

19	**In the given figure, the structure of an antibody molecule is shown. Observe it and answer the following questions:** (a) Identify 'X,' N----C, and H_2L_2 in the structure. (b) Which cells are responsible for producing these molecules? 	2
20	Biotechnologists refer to *Agrobacterium tumefaciens* as a natural genetic engineer of plants. Give reasons to support the statement.	2

21	Attempt either A or B.
	A. Decomposition is a crucial process for mineral cycling in any ecosystem.
	  (a) What are the key steps involved in the process of decomposition?
	  (b) What conditions accelerate or slow down the rate of decomposition?
	 OR
	B. Except for the deep sea hydro-thermal ecosystem, sun is the only source of energy for all ecosystems on Earth.
	(a) Which type of food chain serves as the major conduit for energy flow in an aquatic ecosystem?
	(b) What is standing crop, and what is the accurate method for measuring it?
		2

	SCETION-C	
22	Consider two plants species as described below: Species P: bisexual, androecium and gynoecium mature at the same time and anther and style are almost of the same height Species Q: unisexual, androecium matures later than the gynoecium and anthers are longer than the styles (a) What kind of pollination is likely to be seen in species P and Q. Give a reason for your answer in each case. (b) If a horticulturist wants more viable varieties of offsprings, which species should he choose to cultivate and why?	3

23	(a) Hormones play a crucial role in maintaining balance in living systems through feedback loops. This means that release of a hormone regulates (increases/decreases) its further release in the body. One such example is oxytocin in the female reproductive system. Explain the feedback loop for oxytocin by answering the following questions.
	  (i) From where is oxytocin released? Mention role of oxytocin.
	  (ii) During which stage of pregnancy do oxytocin levels peak? What is the target tissue where oxytocin act?
	(b) Beside oxytocin give the name and function of any other hormone which have supportive role in parturition.
		3

| 24 | The unequivocal proof that DNA is the genetic material came from the experiments of Alfred Hershey and Martha Chase (1952). They worked with viruses that infect bacteria called bacteriophages. Hershey and Chase worked to discover whether it was protein or DNA from the viruses that entered the bacteria. | 3 |

(a) What were the two different radioactive elements used for staining the protein coat and DNA in this experiment?
(b) Write the names of the 2nd and 3rd steps of their experiment, labeling them as B and C.
(c) How did Hershey and Chase conclude that DNA, and not protein, is the genetic material?

| 25 | (a) What is the mode of inheritance of traits causing haemophilia?
(b) What would be the possibility of a female and male child having haemophilia in the following scenarios?
(i) the mother is a unaffected and the father is affected
(ii) the mother is a carrier and the father is unaffected
(c) Write any one similarity and one dissimilarity between Klinefelter's syndrome and Turner's syndrome. | 3 |

| 26 | A scientific group aims to compare the quality of water from various water bodies. They collected samples from 3 water bodies and calculated their BOD amongst other parameters and tabulated them as follows. | 3 |

Sample Name	BOD Level (ppm)
A	100
B	2
C	11

(a) Arrange the sample's name in the descending order with respect to their level of pollution.
(b) Explain how BOD can indicate the level of pollution in water and hence the water quality.

| 27 | (a) Suggest a technique to a researcher who needs to separate fragments of DNA.
(b) Why do DNA fragments move towards the anode during gel electrophoresis?
(c) Write the specific point in the palindrome and the bond that is cut by Eco Rl. | 3 |

| 28 | A patch of grassland was inhabited by 100 goats in August 2022. Between August 2022 and December 2022, it was found that the average natality was 10, average mortality 8, average immigration 5, and average emigration 3. At the end of December 2022,
 (a) what was the population density of goats in the same patch of grassland?
 (b) was there a net increase or net decrease in the population of goats?
 (c) Under the following conditions, which factor(s) contribute more significantly to population growth?
  (i) Under normal conditions
 (ii) if a new habitat is just being colonized. | 3 |

	SECTION-D	
	Q.No.29 & 30 are case based questions. Each question has 3 subparts with internal choice in one subpart.	
29	**Case Study: Natural Selection** A species of butterflies exhibit a range of wing colours. Butterflies with extremely bright wing colours attract predators easily as compared to the ones with very dull wing colours. Butterflies with very dull wing colours fail to attract mates as compared to the ones with bright wing colours. Butterflies with intermediate wing colours have the best chance of both avoiding predators and finding mates. (a) Which type of natural selection does this phenomenon exemplify? (b) Justify your answer(a) by explaining the particular type of natural selection. <center>Attempt either subpart c or d</center> (c) A few years later, the rise in industries and pollution, causes the habitat to become darker. How would it affect the survival of the different kinds of butterflies belonging to this species? Which type of natural selection does this phenomenon exemplify? <center>**OR**</center> (d) In a specific region where this species is prevalent, a mutation in its population leads to butterflies with a shade of wing colours brighter than the existing shades. How would the long-term survivability of this variant be?	4

| 30 | **Case Study: Recent advancement on Cancer**

 Proliferation of cells that have managed to evade central endogenous control mechanisms is a hallmark of cancer. Cancers are classified not only by their organ or tissue of origin, but also by the molecular characteristics of the cancer cells themselves. Because of recent scientific advancements, it is now possible to examine the genetic structure of various cancer types in great detail in a limited amount of time, the growing body of information about cancer's development and progression can be used to develop more accurate diagnostics and/or less toxic cancer treatments. In the long run, the aim is to provide each cancer patient with a treatment regimen that is optimally adapted to his or her condition and circumstance.
 (a) What is the hallmark of cancer as mentioned in the passage?
 (b) How are cancers classified apart from their organ or tissue of origin?
 <center>Attempt either subpart c or d</center>
 (c) What recent scientific advancement has improved the study of cancer cells?
 <center>**OR**</center>
 (d) What is the long-term goal of cancer treatment according to the passage? | 4 |

31	**A.** A large number of couples all over the world including India are infertile, i.e., they are unable to produce children inspite of unprotected sexual co-habitation. (a) Suggest some methods to assist infertile couples in having children. Also, mention the deterrents to adopting these methods. (b) In GIFT (Gamete Intrafallopian Transfer), gametes are transferred to the fallopian tube. Can gametes be transferred to the uterus to achieve the same result? (c) Besides the available methods for infertile couples, what are your suggestions for how such couples can have children without following any assisted techniques? **OR** **B.** The most important step to overcome from population explosion is to motivate smaller families by using various contraceptive methods. (a) "The widespread use of contraceptive methods have a significant role in checking uncontrolled growth of population, however they also cause possible ill-effects " As a student of Biology, give some valid reasons (b) What are the various natural contraceptive methods used for birth control?. (c) As long as the mother lactates fully, chances of conception are almost nil. Justify.	5

32	**A.** X is the first restriction enzyme isolated from strain H of *Bacillus amyloliquefaciens.* This enzyme cuts between two guanine bases of the following palindromic sequence:
	      5'-G G A T C C-3'
	      3'-C C T A G G-5'
	(a) Name the restriction enzyme X. Explain how you arrived at this name.
	(b) How has rDNA technology overcome the disadvantage identified in hybridization technique?
	(c) Explain why vectors which have restriction site/s within a marker gene are preferred, for recombinant DNA technology?
	OR
	B. In 1997, an American company obtained patent rights on Basmati rice, allowing them to market a 'new' strain of Basmati rice in the United States and overseas. This 'new' Basmati strain was actually derived from Indian farmer's varieties.
	(a) What is this unauthorised act called? Define it.
	(b) State two ways in which Indian farmers are set to lose due to this unauthorised act.
	(c) State two measures that different countries are taking to prevent such unauthorised exploitation of their bio-resources.
		5

33	**A.** Ecological relationships between organisms play an important role in the biodiversity of the region. In some cases, they benefit the diversity while in others cause a subsequent reduction in it. (a) A significant reduction in the predator population causes species abundance in the prey species. Is this statement TRUE? Give a reason to support your answer. (b) Barnacles, sticky crustaceans and the blue whale are in a commensal relationship where barnacles use blue whales for transport. How would the extinction of either species cause a change in biodiversity? (c) In which type of ecological relationship can the extinction of one species lead to the extinction of the other species? **OR** **B.** The given graph shows species-area relationship.	5
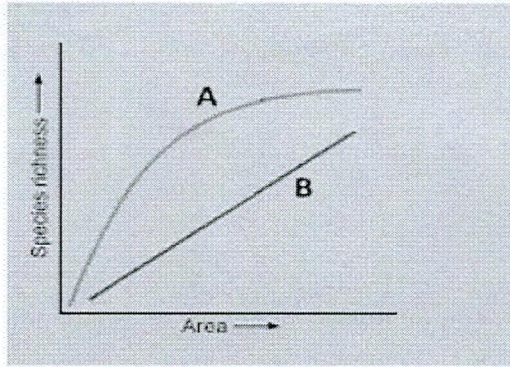
(a) Write the equation of the curve A and B explain.

(b) Since the origin of life on earth, there were five episodes of mass extinction of species.

(i) How is the 'Sixth extinction', presently in progress, different from the previous episodes?

(ii) Who is mainly responsible for 'Sixth Extinction'?

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII   Subject – Computer Science
Time – 3 Hours   Maximum Marks- 70

General Instructions:
(i)   This question paper contains 37 questions.
(ii)   All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions
(iii)   The paper is divided into 5 Sections- A, B, C, D and E.
(iv)   Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
(v)   Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
(vi)   Section C consists of 3 questions (29 to 31). Each question carries 3 Marks.
(vii)   Section D consists of 4 questions (32 to 35). Each question carries 4 Marks.
(viii) Section E consists of 2 questions (36 to 37). Each question carries 5 Marks.
(ix)   All programming questions are to be answered using Python Language only.
(x)   In case of MCQ, text of the correct answer should also be written.

	Section-A
1.	State True or False The keys in a dictionary can be altered later.
2.	Which statement is a sequence of more than one statements? a) Control Statement b) Compound statement c) Single statement d) sequence statement.
3.	Fill the blank space in the code given to read the contents of the text file "abc.txt" and display words with length>4. 　　　　f=open("notes.txt","r") 　　　　words=f.read() 　　　　wrdlst=words.split() 　　　　for w in wrdlst: 　　　　　　if _____ : 　　　　　　　print(w)
4.	Which sql command delete the specified field from the table.
5.	What is the out put of the following? print('RV Sangathan'.split('an'))
6.	What will be the output of the following code? 　　　　txt="How are you, Sunil?" 　　　　x=txt.find(".") 　　　　y=txt.find("?") 　　　print(txt[x+2:y])

7.	Fill the blank space:
	　　　　import random
	　　　　def automatic(): # function to return a random number between 0 and 1
	　　　　　　s=random._____ #
	　　　　　　return s
	a) randint(0,1)　　　　b) random()　　　c) random(0,1)　　　d) randrange(0,1)

1

8.	Which SQL keyword is used to sort the result set in ascending or descending order?
9.	A network helps in a) sending messages b) Sharing resources c) Cost reduction d) All of these.
10.	Evaluate the expression: 56/8+2**3-4

11.	What will be the output of the following code snippet?
	<pre> a=20
	        def call():
	                global a
	                a=11
	                b=31
	                print(a)
	        call()
	        print(a)</pre>

12.	Observe the code given below and find the type of error:
	<pre> x=10
	        if(x%2==0):
	                print("Odd number")</pre>a) Syntax Error b) Logical Error c) Exception d) No Error

13.	The LIKE clause uses _____, _____ characters for matching patterns. a) $, % b) %, _ c) _, ^ d) %, a
14.	A typical format of IP address is the pair of _____ octates. a) 4 b) 2 c) 3 d) 5
15.	Find the value of s. s="-".join(['dps','ranchi']
16.	What will be the output of the following command in python? print("DPS\n\\\nRanchi")

17.	What is the output of the given code?
	<pre> for num in range(5):
	                if num>0:
	                        print(num*100, end=" ")</pre>a) 400 400 400 400 b) 200 300 400 c) 100 200 300 d) 100 200 300 400

18.	Which SQL command is used to add new records in a table? a) ADD b) CREATE c) INSERT d) UPDATE
19.	Identify the device which can connect dissimilar network. a) Router b) Gateway c) Modem d) None of these.
	Directions (Q.No. 20 and 21) are Assertion (A) and Reason(R) based questions. Mark the correct choice as: a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true and R is false. d) A is false and R is true.
20.	(A) Global Variables are declared outside all functions. (R) Global variables should be accessible to all functions, hence they are declared outside all functions.

| 21.	(A) The ORDER BY clause sorts the result set based on one or more columns in ascending or descending order. (R) The ORDER BY clause can only be applied to numeric columns.
	SECTION-B
22.	Write the Python statement for each of the following tasks using BUILT IN functions/methods only: i) to sort the contents of a list in reverse order. ii) To increase the marks of a student by 5, whose data is stored in the following dictionary. S={'Roll':1,"Name":"Amit","Marks":25}
23.	Answer the following questions: a) Write an SQL Query to display the all the names from name field of table student which consists of "kumar". b) Name any two E-mail Protocol

24.	Rewrite the following code after removing the syntactical errors(if any):
	<pre>defchkodd:
	    n=input("enter a number")
	    if N%2=0
	        print("Even")
	    else:
	        print("ODD")</pre>

25.	Write one advantage and disadvantage of STAR and BUS topology with suitable diagram.
26.	Write the string method/functions for the following: a) To change one character into another character. b) To capitalize every first letter of the word.

27.	Identify the correct output(s) also write the minimum and maximum possible values of 'b':
	<pre>import random
	a="Programming"
	b="random.randint(3,8):
	for i in range(0,b,3):
	    print(a[i],end="*")</pre>
	
	a) P* b) P*g* c) P*g d) P*g*m* e) None of these

28.	What do you mean by Cartesian product? Explain with suitable example.
	SECTION-C
29.	Write a definition of a function that opens a file "output.txt" and find the frequency of the word that is passed as parameter to the function in each line of the file. Now write each line number and the frequency of the word in each line to a new file. Example: if the file contains the following text: He is a good boy and he is also good by behaviour. His result is also good. Recently he is also selected for a award. and the word passed is "is" New file contents will be Line 1: 2 Line 2: 1 Line 3: 1

3

30.	Sunita has created a nested lst: "KidsData", storing data of Kids. Write a user defined function PushKids() with the list a as parameter. The function checks the details in the list and pushes them to the list, only if the kids are of "Nursery". List Structure: KidsData:[[KidID,Kidname,Age,Grade],[......., ..., ..., ...],............ and so on]
31.	Consider the following table PREPAID (S_No, C_Name,Model,Connection). Write MySQL commands for the statements given below: a) Write the query so that the model column does not take NULL Value. b) Display all records of table Prepaid. c) Delete a column name Model.

SECTION-D

32. EduYoung University is setting up its Academic Center at East Banglore and planning to set up a network. The university has 4 centers as shown in the diagram below:
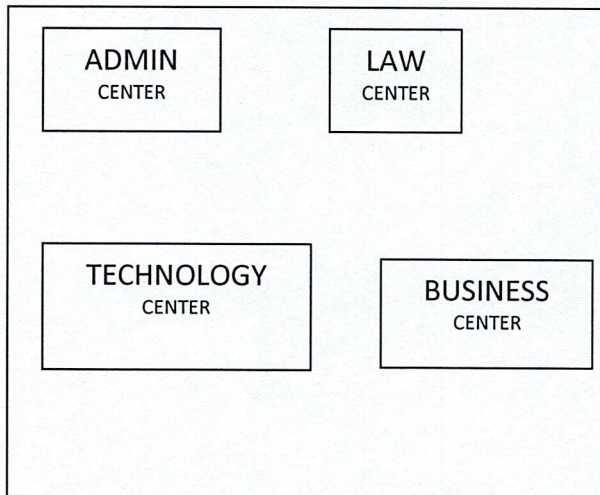
Center to center distances between various buildings	
LAW CENTER TO BUSINESS CENTER	75 m
LAW CENTER TO TECHNOLOGY CENTER	200 m
LAW CENTER TO ADMIN CENTER	125 m
BUSINESS CENTER TO TECHNOLOGY CENTER	55 m
BUSINESS CENTER TO ADMIN CENTER	35 m
TECHNOLOGY CENTER TO ADMIN CENTER	115 m

Number of Computers	
Law Center	70
Technology Center	55
Admin Center	150
Business Center	45

i) Suggest an ideal cable layout of connections between the Center.
ii) Suggest the most suitable place to house the server of this organization with a suitable reason.
iii) Suggest the placement of a Repeater in the network with justification.
iv) Which device will you suggest to be placed/installed in each blocks/center to efficiently connect all the computers within these blocks/centers.
v) The University is planning to extend its network to another city which is 300 km away from Banglore. Which type of network out of LAN, MAN or WAN will be formed? Justify your answer.

| 33. | Write SQL commands for the following queries (i) to (v) based on the relations EMPLOYEE and JOB given below: |

Table: EMPLOYEE

E_ID	NAME	SALES	JOBID
E1	SumitSinha	11000	102
E2	Vijay Singh	13000	101
E3	Ajay Rajpal	14000	103
E4	Mohit Raman	12500	102
E5	Shailja Singh	14500	103

Table: JOB

JOBID	JOBTITLE	SALARY
101	President	250000
102	Vice President	150000
103	Admin Assistant	85000
104	Accounting Manager	70000
105	Accountant	45000
106	Sales Manager	55000

i. To display employee ids, names of employees, job ids with corresponding titles.

ii. To display names of employees, sales and corresponding job titles who have achieved sales more than 13000.

iii. To display names and job titles of those employees who have 'Singh' (anywhere) in their names.

iv. To display details of employee table in descending order of their Sales amount.

v. To change the JOBID to 104 of the employee with ID as E4 in the table EMPLOYEE.

| 34. | A binary file "STUDENT.DAT" has structure (admission_number, Name, Percentage). Write a function countrec() in Python that would read contents of the file "STUDENT.DAT" and display the details of those students whose percentage is above 75. Also display number of students scoring above 75% |

SECTION-E

| 35. | Rahul Kumar of class 12 is writing a program to create a CSV file "user.csv" which will contain user name and password for some entries. He has written the following code. As a programmer, help him to successfully execute the given task. |

```
import      # Line 1
def addCsvFile(UserName,PassWord):          # to write / add data intothe
CSVfile
f=open('user.csv','_____')                # Line2
newFileWriter = csv.writer(f)
newFileWriter.writerow([UserName,PassWord])
f.close()
#csv file reading code
def readCsvFile():                          # to read data from CSVfile
with open(' user.csv','r') as newFile:
    newFileReader=csv._____(newFile)      # Line 3
    for row in newFileReader:
        print (row[0],row[1])
newFile._                # Line4
```

```
addCsvFile("Arjun","123@456")
addCsvFile("Arunima","aru@nima")
addCsvFile("Frieda","myname@FRD")
readCsvFile()                                    #Line5
```
(a) Name the module he should import in Line 1.
(b) In which mode, Rahul should open the file to add data into the file.
(c) Fill in the blank in Line 3 to read the data from a csv file.
(d) Fill in the blank in Line 4 to close the file.

36.	Write a Python code to establish connectivity between Python and MYSQL to show the all records of the table **employee** in separate lines. Note the following to establish connectivity between Python and MYSQL: • Username is root • Password is dps • The table exists in a MYSQL database named company.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II (2024-25)

Class - XII	Subject – Political Science
Time – 3 Hours	Maximum Marks- 80

General Instructions:
1. The question paper consists of five sections (A, B, C, D and E) with 30 questions in total.
2. All questions are compulsory.
3. Question numbers 1-12 are multiple choice questions of one mark each.
4. Question numbers 13-18 are of 2 marks each. Answers to these questions should not exceed 50-60 words each.
5. Question numbers 19-23 are of 4 marks each. Answers to these questions should not exceed 100-120 words each. There is an internal choice in two of the 4 marks questions
6. Question numbers 24-26 are passage, cartoon and map-based questions. Answer accordingly.
7. Question numbers 27-30 are of 6 marks each. Answers to these questions should not exceed 170-180 words.
8. There is an internal choice in 6 marks questions.

SECTION - A

1. Arrange the following events in chronological order and choose the correct option:
   (i) The United Nations Organization was established
   (ii) First World War
   (iii) Second World War
   (iv) The birth of League of Nations
   (a) (ii),(i),(iii),(iv)
   (b) (i),(ii),(iii),(iv)
   (c) (ii),(iv),(iii),(i)
   (d) (iv),(iii),(ii),(i)

2. The representative head of the United Nations Organization is called by which designation?
   (a) President
   (b) General Secretary
   (c) Prime Minister
   (d) Secretary

3. Proponents of the 'narrow' concept of human security focus on-
   (a) The protection of communities and individuals from internal violence
   (b) The protection of communities and individuals from Drought and Hunger
   (c) The protection of communities and individuals from Pandemics
   (d) The protection of communities and individual from Natural Disaster

4. In the following question, a statement of Assertion (A) is followed by a statement of Reason(R). Choose the appropriate option as answer:

Assertion (A): Most of the world's armed conflicts now take place in sub-Saharan Africa.

Reason(R): It is the poorest region of the World.

(a) Both the Assertion and the Reason are correct, and the Reason is the correct explanation of the Assertion.

(b) Both the Assertion and the Reason are correct, but the Reason is not the correct explanation of the Assertion.

(c) The Assertion is incorrect, but the Reason is correct.

(d) The Assertion is correct, but the Reason is incorrect.

5. The first component of India's Security strategy is to strengthening it's..................

(a) Population

(b) Economy

(c) Military Capabilities

(d) Development

6. Which of the following country was attacked by terrorists on 11 September 2001?

(a) France

(b) Spain

(c) Russia

(d) America

7. Match the List I with the List II and choose the best code--

List I	List II
A. Indian National Army	(i) Dalai Lama
B. The First Foreign Minister of India	(ii)Jawaharlal Nehru
C. Tibetan Spiritual Leader who crossed over to India	(iii)Netaji Subhash Chandra Bose
D. The Prime Minister of India during Tashkent Agreement	(iv)Lal Bahadur Shastri

Codes:

(a) A-(iii),B-(i),C(ii),D-(iv)

(b) A-(iii),B-(ii),C(i),D-(iv)

(c) A-(ii),B-(i),C(iii),D-(iv)

(d) A-(iv),B-(ii),C(i),D-(iii)

8. Which two leaders signed the Indus Water Treaty in 1960?

(a) Jawaharlal Nehru and General Ayub Khan

(b) Indira Gandhi and General Ayub Khan

(c) Lal Bahadur Shastri and Zulfikar Ali Bhutto

(d) Jawahar Lal Nehru and Zhou Enlai

9. Who was the Prime Minister of India during 1989 National Front Government?

(a) Jyoti Basu

(b) L.K. Advani

(c) Rajiv Gandhi

(d) V.P. Singh

10. Which of the following personality introduced the New Economic Policy of India?
    (a) Manmohan Singh
    (b) Indira Gandhi
    (c) Atal Bihari Vajpayee
    (d) Chandra Shekhar

11. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).Choose the appropriate option as answer:
    Assertion (A): In 1989 both BJP and Left Front gave the support to the National Front Government.
    Reason(R): They wanted to keep the Congress out of Power.
    (a) Both the Assertion and the Reason are correct, and the Reason is the correct explanation of the Assertion.
    (b) Both the Assertion and the Reason are correct, but the Reason is not the correct explanation of the Assertion.
    (c) The Assertion is incorrect, but the Reason is correct.
    (d) The Assertion is correct, but the Reason is incorrect.

12. The rise of Non-Congress parties first found political expression in the 1977's
    … .... Government.
    (a) Left Front
    (b) Janata Party
    (c) United Front
    (d) Praja Party

SECTION-B (12MARKS)

13. What does 'Asian Way' mean?
14. State any one change in the two smallest countries of the South Asia?
15. What are the meanings of security policy of deterrence and defence?
16. Why and when was Bombay Plan made?
17. State any two reasons for which India adopted the Non-Alignment Policy?
18. Why did China attack India in 1962? Explain any two reasons.

SECTION- C (20MARKS)

19. Highlight any four hurdles in the path of building a stable democracy in Pakistan?
20. What is Veto Power? Which members have this power in United Nations and Why?
21. "Globalization is about the flows of ideas, capital, commodities, and people."Analyze the statement.
    OR
    Briefly examine the cultural effects of Globalization.
22. What reasons did the government give for declaring National Emergency in 1975?
    OR
    The 1977 elections for the first time saw the Opposition coming into power at the Centre. What would you consider as the reasons for this development?

23. "As the decade of the eighties came to a close, the country witnessed some developments that were to make a long-lasting impact on our politics." Justify the statement with any four examples.

SECTION-D (12MARKS)

24. **Read the passage given below and answer the questions that follow:**

The European Union has evolved over time from an economic union to an increasingly political one. The EU has started to act more as a nation state. While the attempts to have a Constitution for the EU have failed, it has its own flag, anthem, founding date, and currency. It also has some form of a common foreign and security policy in its dealings with other nations. The European Union has tried to expand areas of cooperation while acquiring new members, especially from the erstwhile Soviet bloc. The process has not proved easy, for people in many countries are not very enthusiastic in giving the EU powers that were exercised by the government of their country. There are also reservations about including some new countries within the EU.

1. Which of the following countries is not a member of European Union now?
   (a) France
   (b) Germany
   (c) Britain
   (d) Italy

2. The European Union was established in...................
   (a) 1990
   (b) 1992
   (c) 1994
   (d) 1996

3. European Union is emerging as which big power of the World?
   (a) Second
   (b) Third
   (c) Fourth
   (d) Fifth

4. Which of the following European Union attempt failed?
   (a) Own Currency
   (b) Own Flag
   (c) Own Constitution
   (d) Own Founding date

4

25. In the given outline political map of India, four states have been marked as (A), (B), (C) and (D). Identify these states on the basis of the information given below and write their correct names in your answer book along with the respective serial numbers of the information used and the concerned alphabets as per the format that follows:

(i) The home State of Sardar Patel
(ii) The State having Communists government in year1957.
(iii) The state related to the first Agricultural Minister of India.
(iv) The state related to the first Health Minister of India.

भारत– राजनैतिक
INDIA-POLITICAL

Tropic of cancer

Scale
1cm=175 Kms (approx)

5
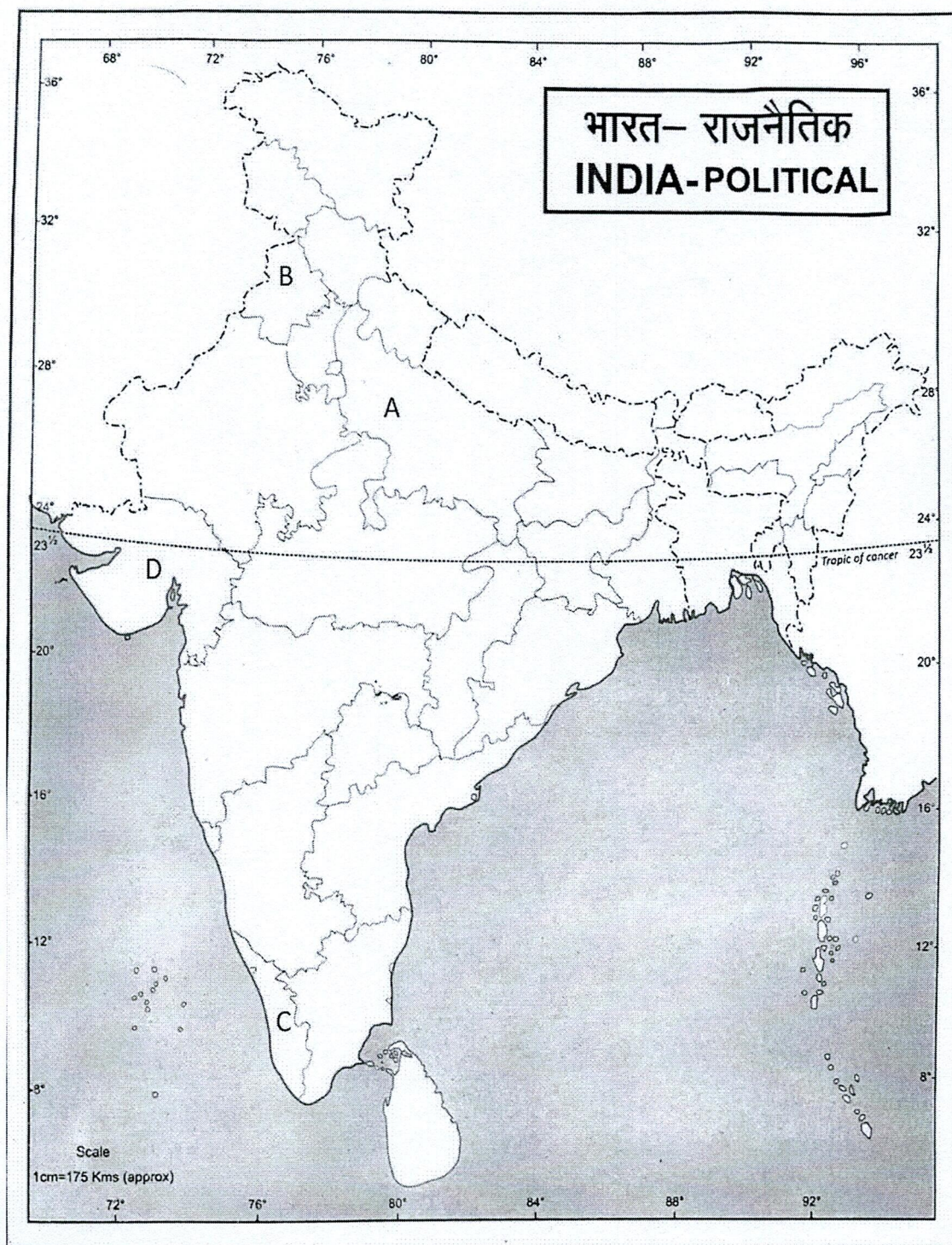
Sr. Number for the information used	Alphabet Concerned	Name of the States
(i)		
(ii)		
(iii)		
(iv)		

26. **Study the given cartoon and answer the questions that follow:**

Credit: R. K. Laxman in The Times of India, 21 August 1969

1) The victory of which President of India is described in this cartoon?   [1]
2) Identify any one leader shown in the cartoon?   [1]
3) What was the role of Mrs. Indira Gandhi in the Presidential Election of 1969?   [2]

SECTION-E (24MARKS)

27. Mention any three causes of the demise of Soviet Union?

OR

Describe any three effects of the demise of the Soviet Union?

28. Explain in your own words the views of Indian side in the matter of environment?

OR

Who are Indigenous People? Give a brief description about the problem of Indigenous People.

29. "The process of the partition of India was surrounded by many problems." Explain the sentence with the help of any three supporting Points.

OR

"The effects of Partition of India were really heartbreaking." Support the statement with the examples of tragedy of Partition.

30. "Regional aspirations of the people of North-East get expressed in different ways." Examine the statement with any three demands or moments.

OR

Regional demands from different parts of India exemplify the principle of unity with diversity. Do you agree? Give reasons.

6

DELHI PUBLIC SCHOOL, RANCHI

PRE-BOARD EXAM-II, 2024-25

Class: XII

Time allowed: 3 Hours

Informatics Practices (065)

Maximum Marks: 70

General Instructions:
- Please check this question paper contains 37 questions.
- All questions are compulsory. However, internal choices have been provided in some questions. Attempt one
- The paper is divided into 5 Sections- A, B, C, D and E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
- Section C consists of 4 questions (29 to 32). Each question carries 3 Marks.
- Section D consists of 2 case study type questions (33 to 34). Each question carries 4 Marks.
- Section E consists of 3 questions (35 to 37). Each question carries 5 Marks.
- All programming questions are to be answered using Python Language only.
- In case of MCQ, text of the correct answer should also be written.
- **Must put a line of separation between two answers.**

Qs No		Marks

Section-A (21 x 1 = 21 Marks)

1] State whether the following statement is True or False [1
In Python Pandas, while performing mathematical operations on series, index matching is implemented and all missing values are filled in with Nan by default.

2] Predict the output of the following query: SELECT MOD (6, 0); [1
A) 0   B) Null   C) NaN   D) D. 4

3] A web page is a specific collection of information provided by a website and displayed [1
to a user on a _____
A) Website   B) Web Browser   C) Web Server   D) Web Hosting

4] In SQL, LEFT ( ) function is equivalent to : [1
A) MID()   B) TRIM( )   C) INSTR( )   D) Both A and B

5] Which of the following element make e-waste hazardous in nature. [1
A) Lead   B) Glass   C) Plastic   D) Iron

6] In a Series named HEAD, the command which will display the first 3 rows is _____ [1
A) print(HEAD.head(3))   B) print(HEAD.Heads(3))
C) print(HEAD.heads(3))   D) print(head.HEAD(3))

7] In order to draw charts in Python, which of the following statement will be used: [1
A) import pyplot.matplotlib as pl   B) import matplotlib.pyplot as plt
C) Import matplotlib.pyplot as plt   D) import pyplot from matplotlib as plt

8] State the statement is True or False: [1
The SQL Group By clause is used for ordering the values of a field along with the records.

9] Which of the following statements will read a csv file "emp.csv" from "c:\\Data" folder. [1
(A) pd.readcsv('C:\\Data\\Emp.csv')   (B) pd.csv('C:\\Data\\Emp.csv')
(C) pd.read_csv('C:\\Emp.csv')   (D) pd.read_csv('C:\\Data\\Emp.csv')

10] Which of the following is Net Etiquette? [1
(A) Be Ethical   (B) Be Responsible   (C) Be Respectful   (D) All

11] If column "per" contains the data set (97.5, 56.2, 75.6, 56.2, 75.6), what will be the output after the execution of the given query? [1
SELECT AVG(DISTINCT Fees) FROM Student;
(A) 76.43   (B) 76.34   (C) 67.43   (D) 67.34

12] Which network topology requires a central controller or hub? [1
(A) Ring   (B) Bus   (C) Star   (D) Mesh

13] To create an empty Series object, you can use: [1
(A) pd.Series(empty)   (B) pd.Series( )   (C) pd.Series(np.NaN)   (D) all of these

14] Software that needs a license to be brought for its usage is called: [1
(A) License Software   (B) FLOSS   (C) FOSS   (D) Proprietary Software

15] What is the output of the following code? [1
S1=pd.Series([1.00, 2.45, 2.73, 2.5])
Print(S1[S1<2])
(A) 0 1.00   (B) 0 True   (C) 0 1.00   (D) 1 1.00
     1 1.45   1 False

16] Which one of the following functions is used to count the no. of rows from the given table in MySQL? [1
A. COUNT(*)   B. CARDINALITY( )
C. COUNT(Column name)   D. All the above

17] When a DataFrame is created from List of Dictionaries, then keys become _____ [1
A. Column labels   B. Row labels
C. Both of the above   D. None of the above

18] To compare data vales of commission earned by salesman over a year, which of the following type of graph should preferably be used? [1
A. line   B. histogram   C. bar   D. scatter

19] _____ is a physical or virtual appliance that passes information between two or more packet-switched computer network. [1
A. Router   B. Switch   C. Both (i) and (ii)   D. None of these.

Q20 and Q21 are Assertion(A) and Reason(R) based questions. Mark the correct choice:
(A) Both A and R are true and R is the correct explanation for A
(B) Both A and R are true and R is not the correct explanation for A
(C) A is True but R is False
(D) A is False but R is True

20] Assertion (A): DataFrame is a multidimensional data structure. [1
Reasoning (R): To create DataFrame we can't import data of class stored in a spreadsheet.
21] Assertion (A): SUM() is an Aggregate function. [1
Reason (R) : Multiple row functions work upon group of rows and return one result for the complete set of rows.

Section-B (7 x 2=14 Marks)

22] (A) Given two series S1 and S2 [2

S1		S2	
A	39	A	10
B	41	B	10
C	42	D	10
D	44	F	10

Find the output for following python pandas statements?
   i)   S1[: 2]*100
   ii) S1 * S2

OR

(B) Consider the following DataFrame "HOSPITAL"

	City	Hospitals
0	Delhi	189
1	Mumbai	208
2	Kolkata	149
3	Chennai	157

What is the python pandas code to create the above output of DataFrame HOSPITAL?
Also write a statement that will replace index in digits into text (i.e. 0 -> zero)

23] How do we unknowingly keep our identity while surfing net? Explain the term with its consequences. [2

24] A relation/table 'Vehicle' is given below: [2

VNO	TYPE	COMAPNY	YEAR	PRICE	QTY
V1	WAGONAR	MARUTI	2009	325000	35
V2	JEEP	MAHINDRA	2005	1600000	10
V3	MIRAGE	MITSUBISHI	2009	500000	15
V4	RAV4	TOYOTA	2012	5500000	10
V5	ALTOLXI	MARUTI	2012	310000	45
V6	FTO	MITSUBISHI	2022	850000	8
V7	LANCER	MITSUBISHI	2021	733000	9
V8	GLANZA	TOYOTA	2022	659000	12

Write suitable SQL queries for the following:
   i)   Display year wise highest price
   ii) Display company wise lowest price

25] (A) Explain the terms Static and dynamic Web pages. [2

OR

(B) Differentiate web browser and search engine?

26] Discuss the significance of EQUI-JOIN clause in detail with the help of suitable example. [2

27] Explain the purpose of IPR act. When was it made? [2

28] (A) Write a Python code to create a DataFrame with appropriate column headings [2
from the list given below:
[[1001,'IND-AUS','2022-10-17'], [1002,'IND-PAK','2022-10-23'],
[1003,'IND-SA' , '2022-10-30], [1004,'IND-NZ','2022-11-18']]

OR

(B) What will be the output of the following code:
```
>>> import pandas as pd
>>> mydata=pd.Series( ['Keerty', 'N Rohit', 'Aadhya', 'Julie'] )
>>> print(mydata < 'Keerty' )
```

Section-C (4 x 3 = 12 Marks)

29] Anika a student of class 12 had opened a face book account newly. She received friend [3
request from a group of class 12 girls from another school. After some time, she starts
getting negative comments on her posts. She also finds that her pictures are being shared
online without her permission. Based on the given information, answer the questions
given below:

[3/7]

i) Identify the type of cybercrime she is a victim of.
ii) Under which act, she can lodge a complaint to the relevant authorities?
iii) Suggest her any two precautionary measures which she should take in future while being online to avoid any such situations.

30] **(A) What will be the output of the following code:** [3

```
import pandas as pd
M=[15, -10, 56, 39, -90, 15]
s=pd.Series(M)
print(s[0])
print(s[[0,3,4]])
```

OR

(B) The python code written below has syntactical errors. Rewrite the corrected code (full) and underline the correction made:

```
import Pandas as pd
COMP={"slid"=["AB102", "AB103", "AB104"], "DEPT"=["CHEM", "ACCT", "MNGR"]}
df=Pd.dataframe(comp)
print(Df)
```

31] **Consider the given table 'Faculty', write suitable SQL queries for the following:** [3

Faculty_Id	First_name	Last_name	Hire_date	Salary
101	Sarika	Mishra	12-10-1997	25000
102	Naveen	Vyas	23-12-1994	18000
103	Rakesh	Sharma	25-08-2003	32000
104	Rashmi	Malhotra	18-09-2004	21000
105	Amit	Srivastava	05-06-2007	28000

Write SQL commands to:
i) To display details of those faculty members whose First_name ends with't'.
ii) Display all records in descending order of Hire_date.
iii) Find the maximum and minimum salary.

32] **(A) Based on the tables given below, write SQL queries for the following:** [3

Table: **GADGET**

I_Id	ItemName	Manufacturer	Price
PC01	Personal Computer	AB Corp	35000
LC05	Laptop	AB Corp	55000
PC03	Personal Computer	Azee	32000
PC06	Personal Computer	COMPAQ	37000
LC03	Laptop	Pacific	57000
PT04	Tablet	Azee	28000

Table: **STOCK**

I_Id	Shop_Name	Qty
PC01	Akhil Enterprises	10
LC01	Nihal and Sons	5
PC03	Renuka Technologies	12
PC01	Tanvi Techno and E-Waste firm	5
LC03	Akhil Enterprises	7

i) Display number of minimum and maximum price for each manufacturer.
ii) Show number of items-name wise of the Gadget, whose 2nd character of item is 'a'.
iii) Print Product name with their corresponding shop details and quantity, of the product.

OR

(B) Consider the tables PRODUCT and CLIENT given below:

TABLE: **PRODUCT**

PR_ID	PR_NAME	MANUFACTURER	PRICE	QTY
BS101	BATH SOAP	PEARSE	45.00	25
SP201	SHAMPOO	SUN SILK	320.00	10
SP235	SHAMPOO	DOVE	455.00	15
BS120	BATH SOAP	SANTOOR	36.00	10
TB310	TOOTH	BRUSH COLGATE	48.00	15
FW422	FACE WASH	DETOL	66.00	10
BS145	BATH SOAP	DOVE	38.00	20

TABLE: **CLIENT**

C_ID	C_NAME	CITY	PR_ID
01	DREAM MART	COCHIN	BS101
02	SHOPRIX	DELHI	TB310
03	BIG BAZAR	DELHI	SP235
04	LIVE LIFE	CHENNAI	FW422

Write appropriate SQL Queries for the following:
i)   Display product wise average quantity required, whose 2nd char. of the product is 'a'.
ii) Display first five characters of Manufacturer name of all products.
iii) Display the product name, price, client name and city with their corresponding matching product Id.

Section-D (2 x 4 = 08 Marks)

33] Write a Python program to display a Bar Chart of the popularity of Programming [4
Languages Data:
Programming languages: Java, Python, PHP, JavaScript, C#, ++
Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7
Give suitable python statement to save this chart and also show the expected output of the graph. Write the statement(s) only that would convert the above, in a Line-Chart.

34] **(A) Deepak, a movie information collector has designed a database for Indian movies.** [4
    Help him by writing SQL query of the following questions based on the given table
    MOVIE:

movieID	Name	Rating	Production	Collection	DORelease
201	Nadiya ke Paar	A+	Rajshree	400	15-Aug-1989
202	Hum Aapke Hai Kon	A+	Dharma	500	04-May-1992
203	Veer Zara	A	Yashraj	1100	25-Oct-2004
204	Chandni	A+	Yashraj	2000	08-Nov-1989
205	Om Shanti Om	A	Red Chillies	2007	14-Nov-2007

(i) Display, movie name and production, in upper case in descending order on Collection.
(ii) Display, all details of movies released in year 1989
(iii) Show production wise counting total number of movies
(iv) Display Name, Production, which has the maximum collection.

OR

(B) Janvi creates a table 'WOOD' with a set of records to maintain the records of wooden
    furniture purchased by her. She has entered the 7 records in the table. Help her to
   **find the answer (SQL Query) of the following questions:**

TABLE : **WOOD**

FID	NAME	DATEOFPURCHASE	COST	DISCOUNT
B001	Double Bed	03-Jan-2018	45000	10
T010	Dining Table	10-Mar-2020	51000	12
B004	Single Bed	19-Jul-2021	22000	10
C003	Double Bed	30-Dec-2020	12000	10
T006	Console Table	17-Nov-2019	15000	12
B006	Dining Table	01-Jan-2021	28000	13

i) Write a query to display WOOD name in upper case in ascending order on discount.
ii) Write a query to display the highest & lowest cost of more than 30000.
iii) Write a query to display name wise sum of cost in wood table.
iv) Write a query to count year wise total number of WOOD purchased.

Section-E (3 x 5 = 15 Marks)

35] "Peace" is an educational NGO. It is setting up its new campus at Mumbai for its Web-   [5
Based activities. The campus has 4 compounds as shown in the diagrid below:
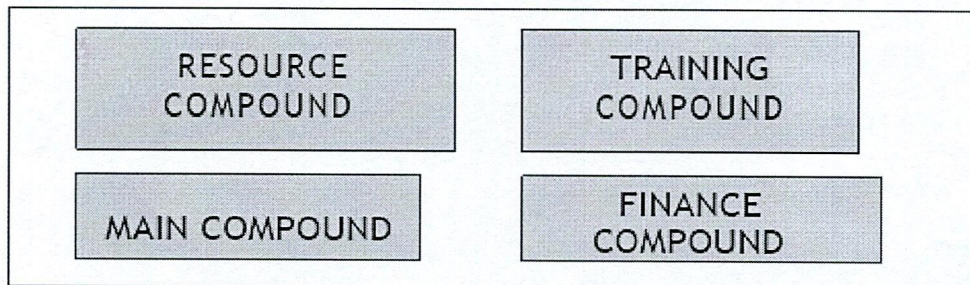
Center to center distances between various Compounds as per architectural Drawings
(in Meter) is as follows:

Main Compound to Resource Compound	50m
Main Compound to Training Compound	40m
Main Compound to Finance Compound	90m
Resource Compound to Training Compound	25m
Resource Compound to Finance Compound	45m
Training Compound to Finance Compound	200m

Expected Number of Computers in each Compound is as follows:

Main Compound	5
Resource Compound	15
Training Compound	150
Accounts Compound	20

i) Suggest a cable layout of connections between the compounds.
ii) Suggest the most suitable topology of the connection between the wings.
iii) Suggest the most suitable place (i.e. Compound) to house the server for this NGO. Also, provide a suitable reason for your suggestion.
iv) Which networking device will you suggest to be procured by the company to interconnect all the computers of various Compounds of MUMBAI campus?
v) The NGO is planning to connect its international office located in Delhi, which out of the following wired communication link, you will suggest for very high-speed connectivity?
   a. Telephone Analog Line
   b. Optical Fiber
   c. Ethernet Cable

36] Ekam, a data analyst with a multinational brand has designed the DataFrame 'Sale' that **[5** contains the four quarter's sales data of different stores as shown below:

	Store	Qtr1	Qtr2	Qtr3	Qtr4
0	Store1	300	240	450	230
1	Store2	250	340	403	210
2	Store3	250	180	180	160

Answer the following question:

i) Predict the output of the following python statement:
    a. print(Sale.size)
    b. print(Sale[1:3])

ii) Delete the last row from the DataFrame.

iii) Write Python statement to add a new column Total_sales which is the addition/sum of all the 4 quarter sales.

iv) (A) Write python statement to export the DataFrame to a csv file named 'data.csv' to be stored at D: drive, under a folder 'mydata'.

OR

(B) Write the output of: **print(Sale[Sale['Qtr2']>200] [['Store','Qtr1']])**

37] **(A) Write suitable SQL query for the following:** **[5**
   i) Display the square root of 200.
   ii) Display 5 characters extracted from 2nd left
   iii) Display the first occurrence of character 'A' from the string "VIDYALAYA".
   iv) Round off the value 99.99 to one decimal place.
   v) Print names of "Name" column from 5th character to 10th character of "Student" table

OR

(B) Ranbir has created following table named exam:

Reg No	Name	Subject	Marks
1	Sanya	Computer Science	98
2	Sanchay	IP	100
3	Vinesh	CS	90
4	Sneha	IP	99
5	Akshita	IP	100

Help him in writing SQL queries to perform the following task:
  i) Insert a new record in the table having following values:
        (6, 'Khushi','CS',85)
  ii) To change the value "IP" to Informatics Practices" in subject column having marks 80, 90, 100
  iii) To remove the records of those students whose marks are less than 30.
  iv) To add a new column Grade of suitable data type.
  v) To display records of "Informatics Practices" (IP) subject in Upper case.

[7/7]

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD - II 2024-25

Class - XII
Time – 3 Hours

Subject – Physics
Maximum Marks- 70

General Instructions

1. There are 33 questions in all. All questions are compulsory.
2. This question paper has five sections: Section A, Section B, Section C, Section D and Section E.
3. All the sections are compulsory.
4. Section A contains sixteen questions, twelve MCQs and four Assertion Reasoning based of 1 mark each, Section B contains five questions of two marks each, Section C contains seven questions of three marks each, Section D contains two case study based questions of four marks each and Section E contains three long answer questions of five marks each.
5. There is no overall choice. However, an internal choice has been provided in one question in Section B, one question in Section C, one question in each CBQ in Section D and all three questions in Section E. You have to attempt only one of the choices in such questions.
6. Use of calculators is not allowed.

SECTION – A

1. A particle of mass m and charge q is placed at rest in uniform electric field E and then released, the kinetic energy attained by the particle after moving a distance y, will be
   (A) q^2Ey
   (B) qEy
   (C) qE^2y
   (D) qEy^2

2. If the potential difference across the plates of a capacitor of capacitance $8\mu F$ is increased from 10V to 20V, then the increase in energy stored is equal to
   (A) 4×10^{-4} J
   (B) 12×10^{-4} J
   (C) 4×10^{-6} J
   (D) 12×10^{-6} J

3. If 3 Ampere of current is flowing between points P and Q in the circuit, then potential difference between P and Q is
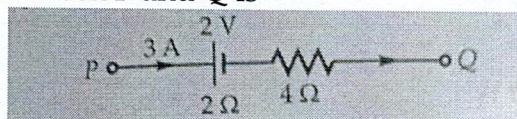
   (A) 30V
   (B) 22V
   (C) 20V
   (D) 15V

4. A current of 2A flows through a $2\,\Omega$ resistor when connected across a battery. The same battery supplies a current of 0.5 A when connected across a 9Ω resistor. The internal resistance of the battery is
   (A) 0.5Ω
   (B) $\frac{1}{3}\Omega$
   (C) $\frac{1}{4}\Omega$
   (D) $\frac{1}{8}\Omega$

5. To convert a galvanometer into an ammeter 10% of main current is passing through the galvanometer. If resistance of the galvanometer is G, then the shunt resistance is
   (A) 9G
   (B) G/9
   (C) 90G
   (D) G/90

1

6. In a region, steady and uniform electric and magnetic fields are present. These two fields are parallel to each other. A charge particle is released from rest in this region .The path of particle will be
(A) ellipse   (B) circle   (C) helix   (D) straight line.

7. In Lenz's law, there is conservation of
(A) charge   (B) momentum   (C) energy   (D) current.

8. An ac voltage source of variable frequency $\dot{\omega}$ and fixed amplitude V_0 is connected in series with a capacitance C and an electric bulb of resistance R. When $\dot{\omega}$ is increased
A. the bulb glows dimmer
B. the bulb glows brighter
C. brightness of bulb does not change
D. Impedance of circuit increases.

9. A plano convex lens has a refractive index 1.6 and radius of curvature 60 cm. What is the focal length of the lens?
(A) 50 cm   (B) 100 cm   (C) 150 cm   (D) 200 cm.

10. In Bohr's model, the atomic radius of the first orbit is r_0 then the radius of third orbit is
(a) r_0/a (B) r_0 (C) $9r_0$ (D) $3r_0$

11. In Young's double slit experiment, the fringe width is found to be 0.4mm. If the whole apparatus is immersed in water of refractive index 4/3 without disturbing the geometrical arrangement, the new fringe width will be
(A) 0.3 mm   (B) 0.4 mm   (C) 0.53 mm   (D) 5.3 mm.

12. A photon emitted when electron jumps from first excited level to ground state of hydrogen atom is used to irradiate a cathode of photocell, the stopping potential of emitted photoelectrons is 5V. The work function of the cathode is
(A) 2.5 eV   (B) 5.2 eV   (C) 5 eV   (D) 2.4 eV.

For Question No 16 -18
Two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true and R is NOT the correct explanation of A
(c) A is true but R is false
(d) A is false and R is also false

13. **Assertion (A):** A proton and an electron with the same momenta, enter a magnetic field at right angle to the lines of force. The radius of the paths followed by them will be the same.
   Reason (R): An electron has lesser mass than proton.

14. **Assertion (A):** The electric lines of force diverges from a positive charge and converges at a negative charge.
   Reason (R): A positive charged particle free to move in an electric field always moves along an electric lines of force.

15. **Assertion (A):** For best contrast between the maxima and minima in the interference pattern of Young's double slit experiment, the amplitudes of two light waves should be same
   Reason (R): For sustained interfence the two sources of light must be coherent.

2

16. **Assertion (A):** The nuclear density is not dependent on the size of nucleus.

**Reason (R):** Volume of nucleus is directly proportional to the nuclear mass or the mass number of an element.

SECTION – B

17. An electron in an atom revolves around the nucleus in an orbit of radius 5 nanometer. The frequency of revolution of electron is 6.8×10^3 MHz, calculate the equivalent magnetic moment.

OR

Out of the two magnetic materials, A has relative magnetic permeability slightly greater than unity while B has slightly less than unity. Identify the nature of the materials A and B. Will their susceptilities be positive or negative?

18. Three point charges +Q, +2Q and -3Q are placed at the vertices of an equilateral triangle ABC of side l. If these charges are displaced at the mid points A_1, B_1, C_1 respectively, find the amount of work done in shifting the charges to their new positions.
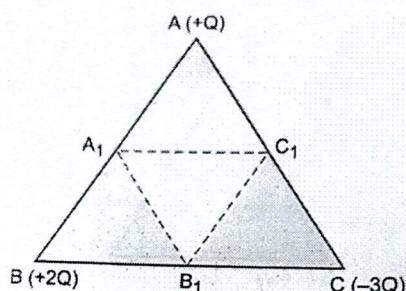
19. An alpha particle when accelerated through a potential difference V volts has a wavelength λ associated with it. In order to have same wavelength, by what potential difference a proton must be accelerated.

20. A beam of light converges at a point P. A concave lens of focal length 16cm is placed in the path of this beam at a distance 12cm from point P. Draw a ray diagram and find the location of the point at which beam would converge.

21. When a metal surface 1cm thick is illuminated with light of wavelength λ, the stopping potential is V_0, but when illuminated by light of wavelength 3λ, the stopping potential is $V_0/6$. Find the theshold wavelength for the metal.

## SECTION-C

22. **(A)** A cell of emf E and internal resistance r is connected across a variable load resistor R. Draw the plot of the terminal voltage V versus the current I.

(B) A uniform wire is cut into three parts with their lengths in the ratio 2 : 3 : 6. The ends of each of the three wires are connected across an ideal battery of 10V. If a current of 5A is drawn from the battery, find the initial resistance of uniform wire.

OR

A battery of 10V and negligible internal resistance is connected across the diagonally opposite corners of a cubical network consisting of 12 resistors each of 3Ω. Determine the equivalent resistance of the network and the current along each edge of the cube.

3
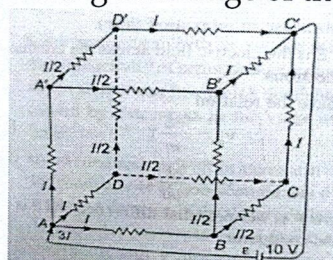
23. When a circuit element X is connected across an ac source, a current of $\sqrt{2}$A flows through it and this current is in phase with applied voltage. When another element Y is connected across the same ac source, the same current flows in the circuit but it leads the voltage by $\frac{\pi}{2}$ radian.

    (i) Name the circuit elements X and Y.
    (ii) Find the current that flows in the circuit when the series combination of X and Y is connected across the same ac source.
    (iii) Plot a graph showing the variation of net impedance of this series combination of X and Y with angular frequency of the ac source.

24. The magnetic field through a circular loop of wire, 12cm in radius and 7.2Ω resistance, changes with time as shown in the figure. The magnetic field is perpendicular to the plane of the loop. Calculate the current induced in the loop and plot a graph showing induced current as a function of time.
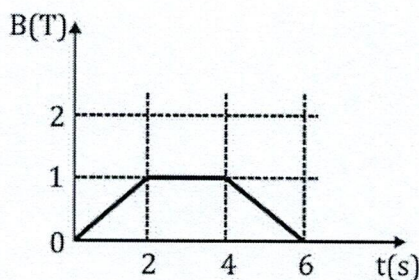
25. (A) Draw a plot of potential energy between a pair of nucleons as function of their separation.
    (B) Mention the values of separation between nucleons when nuclear force is (i) attractive and (ii) repulsive.
    (C) The difference in mass of constituent nucleons and mass of nucleus of element X is 0.367 u. What is the binding energy per nucleon of X? (Mass No of X =40)

26. (i) Identify the electromagnetic waves whose wavelengths vary as
    (A)10^{-12} m $< \lambda < 10^{-8}$m   (B)10^{-3}m $< \lambda < 10^{-1}$m

    (ii) Sketch a schematic diagram depicting oscillating electric and magnetic fields of an electromagnetic wave propogating along X-axis.

27. Using Bohr's theory of hydrogen atom obtain expression for energy of electron in its nth orbit. The wavelength of the second line of Balmer series in hydrogen atom is 4800 Å. Calculate the wavelength of the first line.

28. A student wants to use two p-n junction diodes to convert alternating current into direct current. Draw the labelled circuit diagram she would use. Explain the working of this device. Draw the variation of input and output waveform with time.

SECTION-D

**Direction - Question number 29 and 30 are case study based questions. Read the following paragraph and answer the questions that follow.**

29. When light from a monochromatic source is incident on a single narrow slit, it gets diffracted and a pattern of alternate bright and dark fringes is obtained on screen, called "Diffraction Pattern" of single slit. In diffraction pattern of single slit, it is found that

I. Central bright fringe is of maximum intensity and the intensity of any secondary bright fringe decreases with increase in its order.

II. Central bright fringe is twice as wide as any other secondary bright or dark fringe.

Incident light | Slit

Viewing screen
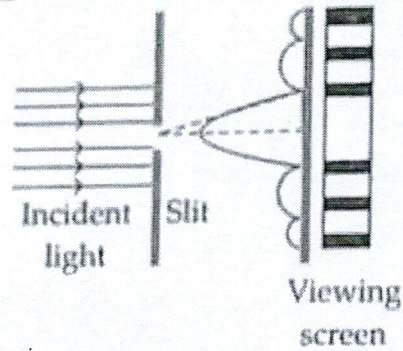
(i) A single slit of width 0.1 mm is illuminated by a parallel beam of light of wavelength 6000 Å and diffraction bands are observed on a screen 0.5 m from the slit. The distance of the third dark band from the central bright band is
A. 3 mm
B. 1.5 mm
C. 9 mm
D. 4.5 mm   [1]

(ii) A diffraction pattern is obtained by using a beam of red light. What will happen, if the red light is replaced by the blue light?
A. Bands disappear
B. Bands become broader and farther apart
C. No change will take place
D. Diffraction bands become narrower and crowded together   [1]

(iii) In Fraunhoffer diffraction pattern, slit width 0.2 mm and screen is at 2 m away from the lens. If wavelength of light used is 5000 Å, then the distance between the first minimum on either side the central maximum is
A. 10^{-1}m   B. 10^{-2}m   C. 2×10^{-2}m   D. 2×10^{-1}m

OR

(iii) Light of wavelength 600 nm is incident normally on a slit of width 0.2 mm. The angular width of central maxima in the diffraction pattern is (measured minimum to minimum)
A. 4×10^{-3} rad   B. 6×10^{-3}rad   C. 4.5×10^{-3} rad   D. 2.4×10^{-3} rad   [1]

(iv) To observe diffraction, the size of the obstacle
A. should be $\frac{\lambda}{2}$, where λ is the wavelength
B. should be of the order of wavelength
C. has no relation to wavelength
D. should be much larger than the wavelength.   [1]

30. When a diode is forward biased, it is found that beyond forward voltage $V = V_k$ called knee voltage the conductivity is very high. At this value of battery biasing for p-n junction, the potential barrier is overcome and the current increases rapidly with increase in forward voltage. When the diode is reverse biased, the reverse bias voltage produces a very small current which almost remains constant with bias.

(i) In the circuit, if the forward voltage drop for the diode is 0.5 V, the current will be   [1]
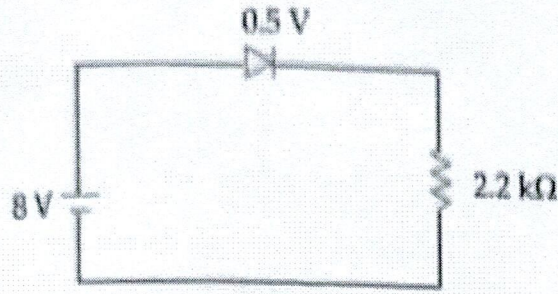
A. 8.3 mA   B. 3.4 mA   C. 2.5mA   D. 3 mA

(ii) In a full wave rectifier, input AC current has a frequency v. Then, find the output frequency.   [1]

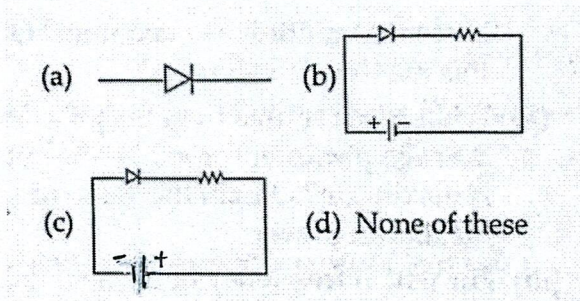A. $\frac{v}{2}$ B. v C. $2v$ D. None of these

(iii) Which diode is in reverse bias?   [1]

(a)   (b)

(c)   (d) None of these

(iv) The forward biased diode is   [1]

(a) A
(b) B
(c) C
(d) D
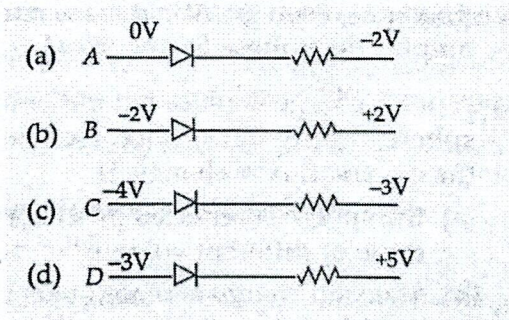
OR

(iv) What is the current in the circuit shown below ?
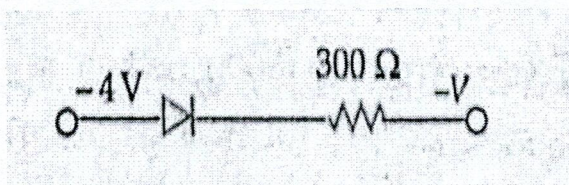
A. 0A   B. 10^{-2}A   C. 1 A   D. 0.10 A

31. **(A)** A straight wire of length L, carrying a current I from east to west, stays suspended horizontally in mid air in a region where there is a uniform magnetic field B. The linear mass density of the wire is λ. Obtain the magnitude and direction of this magnetic field.

    (B) A particle of charge q and mass m is moving with velocity $\vec{v}$. It is subjected to a uniform magnetic field $\vec{B}$ directed perpendicular to the velocity. Show that it describes a circular path. Obtain the expression for (i) radius of circular path (ii) frequency of revolution of charge particle.

<p style="text-align:center;">**OR**</p>

    (A) With the help of a diagram explain the construction of a step- up transformer. Mention its principle of working. Show that in an ideal step-up transformer the value of a primary current is greater than secondary current.

    (B) Current in a coil falls steadily from 5A to 0A in 100 millisecond. If average emf of 200V is induced then calculate the self inductance of the coil.

32. **(A)** Deduce an expression for the electric field intensity due to a uniformly charged infinite line charge using Gauss' theorem.

    (B) Two identical parallel plate capacitors A and B are connected to a battery of V volts with switch S closed. The switch is now opened and the space between the plates of capacitor is filled with a dielectric of dielectric constant K. Find the ratio of total electrostatic energy stored in both the capacitors before and after the introduction of dielectric.

<p style="text-align:center;">**OR**</p>
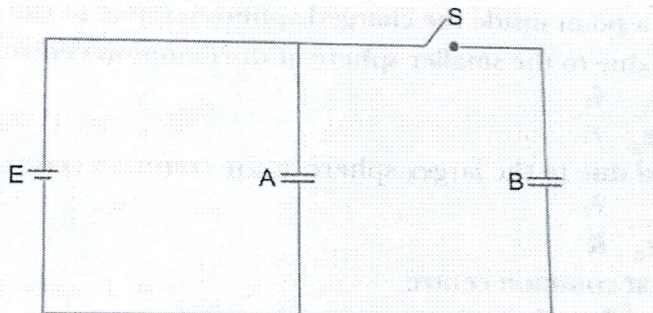
    (A) Explain the term drift velocity of electrons in a conductor. Hence obtain the expression for the current through a conductor in terms of drift velocity.

    (B) Two cells of emfs E_1 and E_2 and internal resistances r_1 and r_2 respectively are connected in parallel as shown in the figure.

    Deduce the expression for the

    a. Equivalent emf of the combination

    b. equivalent internal resistance of the combination

    c. potential difference between the points A and B.
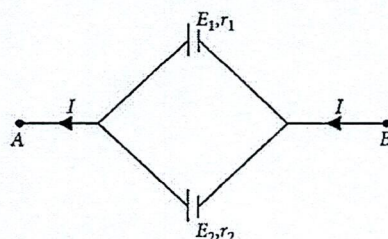
33. **(A)** A point object O is placed in a medium of refractive index n_1 in front of a convex spherical surface of radius of curvature R which separates the second medium of refractive index n_2 from the first one. Draw the ray diagram showing image formation and deduce the relationship between object distance and image distance in terms of n_1, n_2 and R.

(B) You are given two converging lens of focal length 1.25 cm and 5 cm to design a compound microscope. It is desired to have magnification of 30, then find out the separation between the objective and eyepiece.

<div align="center">OR</div>

(A) Obtain formula for refractive index of prism in terms of angle of prism and angle of minimum deviation by giving a proper ray diagram.

(B) A ray PQ is incident normally on the face AB of a triangular prism of refracting angle 60^0 as shown in figure. The prism is made of a transparent material of refractive index $\frac{2}{\sqrt{3}}$. Trace the path of the ray as it passes through the prism. Calculate the angle of emergence and the angle of deviation.
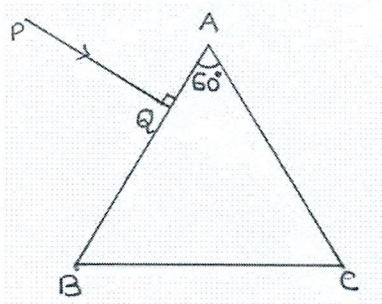
DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD -II (2024-25)

Class - XII   Subject – Odissi Dance (059)
Time – 2 Hours   Maximum Marks- 30

General Instructions:
1. The Question Paper contains three sections: A, B and C.
2. Section A has 08 questions. Attempt all questions. 08 Marks (1X8)
3. Section B has 06 questions. Attempt any 05 questions. 10 Marks (2X5)
4. Section C has 03 questions. Attempt any 2 questions. 12 Marks (2X6)
6. There is no negative marking.

SECTION – A

1. Guru Devprasad Das odissi dance style is based on ?
   (a) Sculptures   (b) Mahari   (c) Gotipua   (d) Folk dance

2. Who is the author of Abhinaya DarpanText ?
   (a) Maheswar Mahapatra   (b) Bharat Muni   (c) Jayadev   (d) Nandikeshwar

3. Hasya rasa deals with which emotion ?
   (a) Valour   (b) Fear   (c) Humour   (d) Anger

4. Sareikela Chhau dance belongs to which state ?
   (a) Chhatisgarh   (b) Jharkhand   (c) Odisha   (d) West Bengal

5. Which instrument is not played in odissi dance performance ?
   (a) Mardal   (b) Flute   (c) Tabla   (d) Manjira

6. Dubhanga pose depicts how many bends ?
   (a) 5   (b) 4   (c) 2   (d) 3

7. Which abhinaya expresses through body ?
   (a) Wachika   (b) Angika   (c) Aharya   (d) Sattvika

8. Bengpatiya is worn in which part of the body ?
   (a) Head   (b) Neck   (c) Feet   (d) Waist

SECTION – B

9. What is the meaning of Patak hast mudra?
                    OR
   How many types of celestial emotions according AbhinayaDarpana?

10. Name two main instruments of Odissi dance performance and write its function.
                    OR
    Define the word Kanchula and Bahichudi?

11. Name any four folk dances of Odisha.
                    OR
    What do you know about Natyadharmi?

1

12. Define the word Nritta?

OR

Who were the ancient temple dancers and medieval dancers of Odisha?

13. How many Rasas are recognized in dance?

OR

Which Chhau dance is listed on UNESCO'S World heritage list of India?

14. What is mainly described in Abhinaya Chandrika Text?

SECTION – C

15. Briefly describe the pataka hasta mudra Viniyaga According Abhinaya Darpana.

16. Briefly describe Guru Dev Prasad Das life histry.

17. Define Abhinaya and describe all the four Abhinaya.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD – II (2024-25)

Class - XII	Subject – Fine Art - Graphics
Time – 2 Hours	Maximum Marks - 30

General Instructions:
- Section-A: Attempt all Questions (Each Question will carry 1 Mark)
- Section-B: Attempt all Questions (Each Question will carry 2 Marks)
- Section-C: Attempt any two Questions (Each Question will carry 6 Marks)

SECTION-A

Very short answer or select the right answer from the given options: [1x8=8]

Q.1. (A) **Assertion (A):** 'Bharat meets Rama at Chitrakuta' painting was painted by Guman.
Reason (R): Kangra sub-school produced most beautiful paintings.
(i)   Both (A) and (R) are true and (R) is the correct explanation of (A).
(ii)   Both (A) and (R) true and (R) is not the correct explanation of (A).
(iii) (A) is true but (R) is false.
(iv)   (A) is false but (R) is true.

(B) The patron of Hydrabad school was:
(i)   Adil Shahi Dynasty
(ii)   Qutub Shahi Dynasty
(iii) Nizam Shahi Dynasty
(iv)   Aasaf Shahi Dynasty

(C) 'Bharat Mata' by Abanindranath Tagore is holding in her four hands a piece of white cloth, rosary, a sheaf of grains and a _____ .
(i)   Book
(ii)   Conch
(iii) Currency note
(iv)   Veena

(D) The most important feature of the paintings of 'Akbarnama' is :
(i)   Landscapes
(ii)   Court Paintings
(iii) Animal-bird Paintings
(iv)   Still Life

(E) Which artist of the Mughal School came from "Tabrez"?
(i)   Bihzad
(ii)   Mir Sayyid Ali
(iii) Khwaja Abdus Samad
(iv)   Ustad Mansur

(F) The Persion translation and illustrated version of the Hindu epic .... came to be known as "Anwar-e-Suhaili".
   (i)   Mahabharata
   (ii) Panchtantra
   (iii) Ramayana
   (iv) Nal Damyanti

(G) 'Phad' is related to :
   (i)   Rajasthani Folk Art
   (ii) Drafting
   (iii) Pahari Painting
   (iv) Mughal Art

(H) A widow has been shown in traditional white clothes without facial features and identity, who is the artist and what medium has been used to create this graphic print.
   (i)   Anupum Sud, medium- lithography
   (ii) Jyotindra Manshankar Bhatt, medium- etching
   (iii) K. Laxma Goud, etching and aquatint
   (iv) P. V. Janakiram, Wire and Tin, Oxidised Copper

SECTION-B :
(Short answer type questions)
The answer to this question is expected to be around 100 words.   [2x5=10]

Q.2. 'Maa', as small as this world is, its explanation is as complex and vast as it is. This is the word without which the existence of any living being cannot be envisaged. Nothing can be compared to the deep love of a mother towards her children, it is unique and incomparable. Appreciate any one artwork, given below in which the above sentiments have appeared.
   (a)   Mother and Child
              OR
   (b)   Children

Q.3. (a) This painting has been displaying a wonderful combination of deep contemplation, Sufism and great devotion for music.
       Identify this painting and describe it on the basis of fundamental of art and composition arrangement in your own words.
                OR
       (b) Nuruddin has ingeniously employed the device of soft undulating mound in the centre to divide the painting into two sections.
       Identify the painting and Sub-School.
       Highlight any two main features of the painting.

Q.4. (a) A famous painter who is considered as the father of Indian Renaissance and Society of Oriental Art. He introduced a new art style by combining the Indian Mughal and Rajasthani styles of notation along with the Japanese wash technique, his style later became known as the Bengal school.
       Identify this artist and describe his name, main medium and name of the one major art work.
       Explain the on the basis of method, material, fundamentals of art and symbols.

2

OR

(b) How far is the print maker successful in representing the power of feminine Shakti through his graphic print. Justify your answer by explaining in detail about the graphic print 'Devi' included in your course on the below given parameters.
Name of the print maker, subject, compositional arrangement and explain the technique used by him.

Q.5. (a) 'The sacred representation of the divine power and the extreme anger is depicted in this artwork. The forceful strong waves of the sea create an environment of cyclonic winds, and lightning which is also portrayed well by the flowing clothes of the human forms.' Identify the name of the painting, medium, artist and describe the painting.

OR

(b) What type of method, materials was used by P.V. Janakiram for the sculptures? Write a short note about the sculpture made by P.V. Janakiram included in your course of study.

Q.6. Identify the artist of Modern Trends who depicted hunger, poverty, soreness, pain, and emotions through the simple composition of the human family in their artwork. They have also attracted the attention towards major Social Problems. Explain by the below-mentioned points in detail:
(a) Name of Sculpture, Artists, Medium, Technique and Compositional Arrangement. Describe the social and moral problems shown in his art-work.

OR

(b) Identify the Painting, Artist, Medium, Technique and Compositional Arrangement. Describe the social and moral problems depicted in this art-work.

SECTION-C

Attempt any two questions from the given options (Long answer type questions)
Answer for this question is expected in more than 200 words   [6x2=12]

Q.7. In what way did the Indian artists contributed to the struggle for the National Independence? How there art work contributed.

Q.9. Write an essay on the origin and development of the Mughal School or Rajasthani School of Miniature Painting.

Q.8. How far is the printmaker successful in visually communicating and expressing their emotions and feelings with the masses through her Graphic print? Elucidate and justify your point of view by explaining in detail about this graphic print included in your course on the following given parameters. Name the print, printmaker, medium, subject matter. Explain compositional arrangement and technique of medium used in this print.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD – II (2024-25)

Class – XII	Subject – Hindustani Music Vocal
Time – 2 Hours	Maximum Marks- 30

सामान्य निर्देश :

इस प्रश्न पत्र में तीन खण्ड हैं **क , ख और ग।**

खण्ड-क 1 अंकों के हैं। सभी प्रश्न अनिवार्य हैं।

खण्ड-ख 2 अंकों के हैं। सभी प्रश्न अनिवार्य हैं।

खण्ड-ग 6 अंकों के हैं। सभी प्रश्न अनिवार्य हैं।

खण्ड – क   **[1×8=8]**

1. संगीत के दृष्टि से शुद्ध परिभाषा सातों, बाईस, काली
   (i) बारह बारह शुद्ध स्वर
   (ii) बारह शुद्ध विकृत स्वर
   (iii) ग्यारह बारह विकृत स्वर
   (iv) बारह बारह शुद्ध स्वर

2. सा रे, रे ग, ग म, म प .... का प्रकार हैं
   (i) राग
   (ii) ताल
   (iii) अलंकार
   (iv) कोमल

3. रागों के गुण दोष का वर्णन
   (i) रागानुचिंतन
   (ii) रागानुभाव
   (iii) रागानुभूति
   (iv) रागानुभूति

4. कृति रचना का एक मात्रा में ताल पद्धति के लिए लिखें :-
   (i) x (सम का)
   (ii) ( ) (कालांश का)
   (iii) 2 (अवग्रह का)
   (iv) ⌒(अर्द्धमात्रा का)

5. मिलान कीजिए ।

सूची- I	सूची- II
क. धमार	1. (प)
ख. बड़ा ख्याल	2. 15 प्रकार
ग. गमक	3. विलम्बित लय
घ. खटका	4. 14 मात्रा

(i) क-2 ,ख-1, ग-4, घ-3

(ii) क-4, ख -3, ग-2, घ-1

(iii) क-3, ख -4, ग-2, घ-1

(iv) क-4, ख-3, ग-1, घ-2

6. **कथन- I**: बागेश्री का थाठ काफी है।

कथन - II: भैरव सन्धिप्रकाश राग है।

(i) कथन (अ) सही है, किन्तु (ब) गलत है।

(ii) कथन (अ) गलत है, किन्तु (ब) सही है।

(iii) कथन (अ) और कथन (ब) दोनो सही है।

(iv) कथन (अ) और कथन (ब) दोनो गलत है ।

7. **कथन -I**: धमार ताल द्रुत लय की ताल है।

कथन - II: तान को द्रुत लय मे गाया जाता है।

(i) कथन (अ) सही है, किन्तु (ब) गलत है।

(ii) कथन (अ) गलत है, किन्तु (ब) सही है।

(iii) कथन (अ) और कथन (ब) दोनो सही है।

(iv) कथन (अ) और कथन (ब) दोनो गलत है ।

8. सही कथन चुने।

क. वह राग जिसका वादी कोमल स्वरों मे हो ' उत्तरांगवादी' राग कहलाता है।

ख. राग बागेश्री रागांग पद्धति के अनुसार स्वयं रागांग राग है।

ग. झपताल को धुपद के साथ बजाया जाता है।

घ. पूर्वांगवादी रागों का गायन समय दिन के 12बजे से रात्रि 12 बजे तक होता है।

(i) क और ख

(ii) ख और ग

(iii) ग और घ

(iv) ख और घ

9. निम्नलिखित को परिभाषित कीजिए

   मीड, कण

अथवा

दो तान सहित राग मालकौंस के महत्वपूर्ण लक्षणों को लिखिए ।

10. भारतीय संगीत के इतिहास में संगीत रत्नाकर के महत्व के बारे में विस्तृत रूप से लिखिए।

अथवा

तानपूरे की तारों को किन किन स्वरों में और किस प्रकार मिलते हैं ?

11. उन तालों का नाम बताए जिनके बोल में **धी ना** आता है। उनमें में किसी **एक** ताल का परिचय व ठेका लिखें।

12. संगीत पारिजात ग्रंथ का संक्षिप्त परिचय दीजिए।

अथवा

निम्नलिखित स्वरों के वाक्यांश से राग को पहचाने और इसे 30 स्वरों तक विस्तृत करें।

सा ग़ म प ध़ ध़ प

13. हिन्दुस्तानी संगीत में किन चार सिद्धांतों के आधार पर रागों का समय निश्चित किया गया है? स्वर संयोग से समय निर्धारण के बारे में समझाइए।

अथवा

तान और आलाप में अंतर स्पष्ट कीजिए।

खण्ड - ग   [6×2=12]

14. भारतीय शास्त्रीय संगीत मे अलंकार एक बहुत ही महत्वपूर्ण अवधारणा है। अलंकार का शाब्दिक अर्थ है आभूषण । इनका उपयोग राग के अलंकरण के लिए किया जाता है। इसे पलटा भी कहा जाता है।स्वर की विभिन्न गतिविधियों को सीखने मे ये बहुत महत्वपूर्ण है क्योंकि अलंकार वर्णों पर आधारित होतें है। अलंकार को विभिन्न ताल और रागों मे बनाया जा सकता है।
उपर्युक्त गद्यांश को पढ़ने के बाद तीन अलग - अलग वर्णों के आधार पर 6 अलंकार बनाएं ।

अथवा

उस्ताद बड़े गुलाम अली खां का जीवन परिचय व भारतीय शास्त्रीय संगीत के विकास के प्रति किए गए योगदान पर संक्षिप्त टिप्पणी लिखिए।

15. अपने पाठ्यक्रम में दिए गए किसी एक राग में एक विलंबित ख्याल को स्वरलिपि सहित लिखिए।

अथवा

राग भैरव में छोटे ख्याल को स्वर लिपिबद्ध करते हुए **दो** 16 मात्राओं वाले तान भी लिखें।

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE BOARD – II (2024-25)

Class - XII	Subject – Fine Art - Painting
Time – 2 Hours	Maximum Marks - 30

General Instructions:
- Section-A: Attempt all Questions (Each Question will carry 1 Mark)
- Section-B: Attempt all Questions (Each Question will carry 2 Marks)
- Section-C: Attempt any two Questions (Each Question will carry 6 Marks)

SECTION-A

Select the right answer from the given options: [1x8=8]

1. A. In which direction, faces of the horses are depicted in the painting Chaugan Players?
   a) Face-to-face with everyone .
   b) In the opposite direction.
   c) Two facing each other & four in opposite direction .
   d) Four facing each other and two in opposite direction.

B. **Assertion (A):** Mughal Miniature paintings glorified the Crowned Rulers to make them distinct and Superior.
   Reason (R): The brave, generous and gallant rulers were sometimes made with a glowing Halo and appeared bigger than the usual size.
   i. Both A and R are true, and R is the correct explanation of A
   ii. Both A and R are true, but R is not the correct explanation of A
   iii. A is true but R is false
   iv. A is false and R is true

C. The Pahari School is characterized by the use of which type of colour palette?
   a) Dark and muted colours
   b) Bright and vibrant colours
   c) Monochrome shades
   d) Pastel colours

D. Which artist is associated with the revival of traditional Indian art and the Bengal School?
   a) Rabindranath Tagore
   b) Nandalal Bose
   c) Raja Ravi Varma
   d) Amrita Sher-Gil

E. The Progressive Artists' Group (PAG), formed in 1947, included which of the following artists?
   a) Rabindranath Tagore and Abanindranath Tagore
   b) M.F. Husain and F.N. Souza
   c) Nandalal Bose and Jamini Roy
   d) Raja Ravi Varma and Gaganendranath Tagore

F. Mention the names of any five important Indian artists who contributed to the National Freedom Movement?

G. Mughal paintings are characterized by their:
   a) Flat and decorative style
   b) Realistic portrayal of human figures and nature
   c) Use of bold colors and abstraction
   d) Large size and public display

H. In which sculpture Amarnath Sehgal reflected the agony of society and created a powerful impact showing pain, distress and helplessness from your syllabus:
   a) Santhal family
   b) Cries unheard
   c) Ganesha
   d) Triumph of Labour

SECTION-B
(Short answer type questions)
The answer to this question is expected around 80 to 100 words   [2x5=10]

2. **(A)** Abanindranath created awareness about the lost language of Indian art from our rich past. Supporter of Swadeshi values, started a journal which published the paintings of Bengal School. In one of his paintings he depicted as the sun sets, a cycle of life comes to an end after being oppressed by its owner.
   (i) Explain: the painting to show the connection of the theme 'the struggle for life till its last breath' in today's context.
   (ii) Describe the salient features of Bengal school.

OR

(B) Why do you like or dislike the painting "Meghdoot" from Bengal School of Art? Give suitable reasons. Why the figure of this painting is elongated and bold line are used.

OR

Write about three phases of Indian National Flag evolution.

3. **(A)** In this miniature painting, the artist has skillfully and aesthetically added a mound between trees which enables the division of the painting into two parts. The upper part showcases indoor environment of the palace, while the lower part flaunts the lush green outdoor garden of Rajasthan area.
   (i) Identify the painting, its artist, medium and technique.
   (ii) Briefly explain to what extent the artist has been successful in depicting its subject matter?

OR

(B) Analyze five stylistic features of Pahari painting?
   " In this Pahari miniature painting Krishna and Balram are shown in 'Baal Swaroop', travelling inside a bullock cart with their mother. The composition is enhanced by adding a naturalistic background."
   (i) Identify the painting, its artist, medium and the sub school.
   (ii) According to you, till what extent has the artist been successful in depicting its subject matter?

4. **(A)** In which Mughal painting the fragrance of 'the bond of friendship' is seen, shared through 'simple living and profound thinking",
      i)   Name the painting, and painter and explain this monochrome artwork.
      ii)   Explain the special qualities of this bond.
      iii)   Which qualities do you want to imbibe in your life?

OR

(B) Identify the painting and its artistic from Provincial School which reflects the grandeur of the Mughal Empire. Here, near the distant horizon women from the groom's side have been shown seated on elephants. And briefly explain the tableau of grandeur seen in the picture? Appreciate the use of Borders and vibrant colours in the Mughal miniature of that time. Elaborate on the themes and their use of perspective and profile figures.

5. **(A)** Why do you like the painting style of Deccan School? Support your answer with any four characteristics that you admire in this style?
Identify the painting, its sub school from Deccan style in which the sacred relationship between Mentor and Disciple has been depicted. And write any two human values explained through this painting?

OR

(B) Describe these artwork aesthetically on the basic of artist, medium and technique of
  a) Children.   b) Triumph of labour.   c) Ganesha

6. **(A)** "Naari Shakti, her power as a creator is the essence of this Print. enhanced by the concept and practices of energizing the Kundalini and Divine Yoga. It defines the women as a symbol of divinity and grace' in a simplistic manner. Based on the above statement, carefully observe and analyze to describe the attached Graphic Print on the following parameters

(i) Identify the Title, Name of its Printmaker, Medium, and Technique.
(ii) Composition arrangement along with your creative views.

OR

(B) In this painting 'The brilliance of expressions and command over human anatomy makes the anger of Maryada Purushottam Rama come alive. The depiction of Ocean God frightened by the anger of Lord Rama is enhanced by the flashing lightning.'
(i) Identify the painting and the artist of Contemporary Modern Period.
(ii) Using aesthetic parameters explain this painting based on theme of Valmiki Ramayana.

SECTION-C

Attempt any two questions from the given options (Long answer type questions)
An answer for this question is expected in around 200words   [6x2=12]

7. 'The Miniature paintings of Rajasthani School are inspired by our old sacred texts and scriptures. In some paintings, the essence of the story is illustrated with same figure shown more than one time in the same picture frame.' Explain any one painters on the basis of below mentioned.
(i) Identify the Painting, Artist, Medium and Technique
(ii) Compositional Arrangement .
(iii) How effective is the narrative in this style of repetition of the same human figures?

·8. During the Mughal period, which emperor was liberal in his religious beliefs, and his governing period was known as the "Golden Age for secular-themed paintings".
   (i) How did he promote the belief of secularism through paintings?
   (ii) Identify the famous painting made by using the image of a Hindu God which promoted secular belief associated with this Mughal Emperor, mention the name of the artwork, its artist, and medium.
      Explain how this painting is a perfect example of secularism and religious unity?

9. **(A)** What is the Modern trends in Indian Art?
   (B) 'The female Contemporary Modern artists who got trained outside the country yet she was inspired by the paintings of Ajanta caves, made a huge contribution by depicting the vulnerable condition and sadness faced by the Indian females of that time.'

   (i) Based on the above statement - Identify the Artist and the Artwork along with its Medium and Technique.
   (ii) Elaborate on the condition of females in the society during that time as painted by her in the painting.

                              OR

   This timeless embodiment of compassion, who embraced the poor and the destitute as her own, has been captured on the canvas in semi abstract forms by M.F. Hussain.
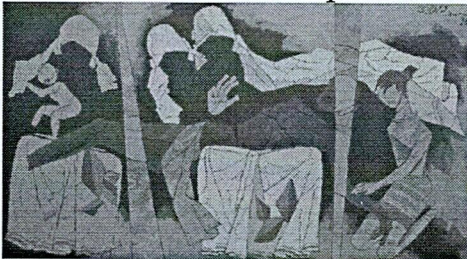
   (i) Who was this compassionate lady? Name the title of this work, its medium and technique.
   (ii) Despite of not having any facial features or expression, what emotions does this painting evoke in you as an artist?
   (iii) How successful has, the artist been in use of modern trends in art.