DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:- Business Studies**

Time- 3 Hrs.   **M.M.-80**

General Instructions:-

1. This Question paper contains Five Sections: A,B,C,D and E.
2. Section A contains Objective Type Questions carrying ONE Mark each.
3. Section B contains questions carrying THREE marks each, answers to which may be given in 50 – 75 words.
4. Section C contains questions carrying FOUR marks each, answers to which may be given in about 120 words.
5. Section D contains questions carrying FIVE marks each, answers to which may be given in about 150 words.
6. Section E contains questions carrying SIX marks each, answers to which may be given in about 200 words.
7. Attempt all parts of a question together.

SECTION - A

1. Which of the following is not an objective of management?
   (a) Earning profits   (b) Growth of the business
   (c)Providing employment   (d) Policy making   [1]

2. Vaibhav garments Ltd's target is to produce 10,000 shirts per month at a cost of Rs. 150 per month. The production manager could achieve this target at a cost of Rs. 160 per shirt. Do you think the production manager is effective? Give reason in support of your answer.   [1]

3. Significance of management principles does not include _____

   (a) Optimum utilization of resources   (b) Increase in efficiency

   (c)Initiative   (d) Coping up with changing environment   [1]

4. Business environment does not have the following characteristic

   (a) Uncertainity   (b) employees   (c) Relativity   (d) Complexity   [1]

5. ABC Ltd. announced a plan that nobody would smoke in the organisation premises and they further added certain penalty will be imposed on employees over looking this, Identify which of the following plan was implemented.
   (a) Policy   (b) Objective   (c) Rule   (d) None of these   [1]

6. Which of the following is not a step of the 'Organising' Process ?

    (a) Division of activities   (b) Creation of jobs and departments
    (c) Assigning the duties   (d) Providing leadership   [1]

7. A company is manufacturing paper plates and bowls. It produces 1,00,000 plates and bowls each day. Due to local festivals it got an urgent order extra 50,000 plates. Advise how will the company fulfill its order and which method of recruitment would you suggest from the following?

    (a) Labour contractors (b) Advertisement (c) Employment exchange (d) None of these   [1]

8. Blue Birds Ltd. offers to its employees issue of shares at a price which is less than the market price. Identify the type of incentive offered by Blue Birds Ltd. to the employees from the following.

    (a) Profit sharing   (b) Bonus   (c) Co-Partnership/Stock Option   (d) None of these [1]

9. Mohan and Sohan are friends working in Surya Ltd. as Production Manager and Sales Manager respectively. In an Interdepartmental meeting, Sohan informed Mohan about a change in the Marketing Policy of the Company. Identify which type of communication was used by Mohan and Sohan from the following.

    (a) Informal communication   (b) Formal communication
    (c) Vertical Communication   (d) Diagonal Communication   [1]

10. Mr. Sarthi, the Ex.Chairman of Swadesh Ltd. built up his successor before retiring. Following the norms set up by himself, he handed over the reins of the company to the co-founder Mr. Shravan, who had the potential to bring about change in the behavior of others. Name the concept of management which was the reason why Mr. Sarthi chose Mr. Shravan to be the successor.

    (a) Motivation   (b) Leadership   (c) Communication   (d) staffing   [1]

11. ABC Ltd., is manufacturing auto spare parts on large scale. The company policy is that 3% of the daily production could be defective. Over the last two months it is observed that about 10 – 12% of the production is defective. Which function of management is required to correct the above case?

    (a) Planning   (b) Organising (c) Staffing   (d) Controlling   [1]

12. Companies with higher growth potential are likely to _____

    (a) Pay lower dividend   (b) Pay higher dividends
    (c) Dividends are not affected by growth considerations   (d) None of these   [1]

13. State True/False for the statement given below:

    'Cost of Debt' is lower than the cost of 'Equity Share Capital'   [1]

14. XYZ Company wants to establish a new unit in which a Machinery worth 10 lakhs is required. Identify which of the following decisions involved in Financial Management.

    (a) Investment Decision (b) Dividend Decision   (c) Financing Decision (d) None of these [1]

15. Mission Coach Ltd. is a large creditworthy company that manufactures coaches for the Indian Railways. It now wants to export these coaches to other countries and decides to invest in new hi-tech machines. Since the investment is large, it requires long-term finance. It decides to raise funds by issuing equity shares. The issue of equity shares involves huge floatation cost. To meet the expenses of floatation cost, the company decides to tap the money market.

    Which of the following money-market instrument can be used by the company for the above purpose?

    (a) T – Bills　　　　　(b) Commercial Papers　(c) Certificate of Deposit　(d) None of These　　　　[1]

16. 'Maruti Vega Ltd.' entered into the market with coloured television and has now introduced products like audio systems, air-conditioners, washing machines, etc. The company is not only offering the products but also handling complaints and offering after-sales services. The element of Marketing Mix being followed by the company is _____

    (a) Product　　　　　(b) Price　　　　　(c) Promotion　　　　(d) Place　　　　[1]

17. 'GATA Ltd.' is a large multinational company and operates in many countries of the world. The company is in the business of Insurance, Health care, Business process outsourcing, Computer education, Security etc. What is being marketed by the Company?

    (a) Ideas　　　　　(b) Persons　　　　　(c) Places　　　　(d) Services　　　　[1]

18. 'Beauty Products Ltd.' is a natural and ethical beauty brand, famous for offering organic beauty products for men and women. The company uses plant based materials for its products and is the No.1 beauty brand in the country. It not only satisfies its customers but also believes in overall protection on the planet.
    Identify, which of the following marketing management philosophy being followed by 'Beauty Products Ltd.'

    (a) Product Concept　　　　　　　(b) Selling Concept
    (c) Production Concept　　　　　　(d) Societal Marketing Concept　　　　[1]

19. Suman bought a box of cheese of a reputed brand from a local shopkeeper. On opening the box, she found a piece of stone in the cheese. She reported the matter to the shopkeeper who forwarded her complaint to the concerned company. Within a week, the representative of the company visited Suman's residence with an apology and as a replacement offered her a new cheese pack with four other varieties of cheese as compensation for the inconvenience to her. Which of the following consumer right was exercised by Suman?

    (a) Right to Safety　　　　　　　(b) Right to Choose
    (c) Right to be Heard　　　　　　(d) Right to Seek Redressal　　　　[1]

20. On Sonika's birthday, her mother gave her a pair of gold ear-rings. After one month, Sonika observed that the ear-rings are losing their shine. She checked the mark on the ear-rings and found that it was not a proper Hallmark and her mother had been cheated by the shopkeeper. So, she filed a complaint in the District Forum which rejected it. She was very much disturbed due to the decision of District Forum and she decided to appeal further . Suggest her within how many days of passing the order of District Forum , she can file a case in State Forum against the decision of District Forum.   [1]

SECTION - B

21. "Lack of proper management results in wastage of time, money and efforts." In the light of this statement, explain any three points of importance of management.   [3]

    OR

    At what level of management the managers are responsible for the welfare and survival of the organisation? Name it and mention any two functions of the same level .

22. 'Grahak Shakti,' an NGO organized a workshop to discuss various issues relating to consumers. During the discussion, one of the members drew attention towards exploitation of consumers due to defective and unsafe products, adulteration, black marketing, hoarding etc. To this another member argued that consumers themselves are responsible as they do not raise collective voice against exploitation. The chairperson of the organisation was of the opinion that it was also the duty of the businessmen to take care of the interests of various stakeholders. Business organizations earn money by selling goods and services to consumers. So the interests of the stakeholders have to be well taken care of.
    State three points that highlight the need for consumer protection as discussed in Grahak Shakti's workshop.   [3]

23. Banwari Lal is a cloth merchant in Karol Bagh. His grandsons are requesting him to let them diversify the business into bridal wear. Banwari Lal has agreed but on the condition that they will follow the function of management he has always followed, which helps the organisation in keeping track of the progress of activities and ensures that the activities conform to the standards set in advance so that the organizational goals are achieved.
    Name the function of management which Banwari Lal is asking his grandsons to follow. List any two reasons why it is considered an indispensable function of management.   [3]

24. Crackers Ltd., a fire- cracker manufacturing company, launched some new products on the eve of Diwali which attracted many buyers. The company was in a hurry to maxmise the production to meet the increased demand and ignored to mention appropriate safety warnings for use on the packets that led to many accidents.

    Identify and explain the important product related decision that was not taken into consideration by the company and any two points of importance of the same decision.   [3]

25. Kiran industries is a company dealing in office furniture. The company chose to diversify its operations to improve its growth potential and increase market share. As the project was important, many alternatives were generated for the purpose and were thoroughly discussed amongst the members of the organisation. After evaluating the various alternatives, Sukhvinder, the Managing Director of the company, decided that they should add ' Home Interiors and Furnishings' as a new line of business activity.

(a) Name the framework, which the diversified organisation should adopt, to enable it to cope with the emerging complexity?

(b) Give one advantage and one disadvantage of the same identified in (a) above   [3]

SECTION – C

26. Metlapp Networks and Technologies Ltd. is a leader in technology innovation in the United States, creating products and solutions for connecting the world. It has a large research and development team which invented the first smart watch, named as W- 7. The watch besides showing the time, also monitors few health parameters like heart beat, blood pressure etc.

 While in search of markets abroad, the company found that in India, the reform process was underway with the aim of accelerating the pace of economic growth. The company decided to take advantage of simplified export procedure and removal of quantitative as well as tariff restrictions in India.

It set up its office in Jamnagar with a view to capture the Indian market. In a short span of time, the company emerged as a market leader. Success of the company attracted many other players to enter the market. Competition resulted in reduction in prices, there by benefiting customers.

(a) In the above paragraph, two major concepts related to government policy have been discussed. Identify and explain these concepts.

(b) Also, explain briefly any two impacts of these concepts on Indian business and industry.   [4]

27. Samir Gupta started a telecommunications company, 'Donira Ltd.' to manufacture economical mobile phones for the Indian rural market with 15 employees, The company did very well in initial years. As the product was good and marketed well, the demand of the products went up. To increase production, the company decided to recruit additional employees. Samir Gupta, who was earlier taking all the decisions for the company, had to selectively disperse the authority. He believed that subordinates are competent, capable and resourceful and can assume responsibility for the effective implementation of their decisions, This paid off and the company was not only able to increase its production but also expanded its product range.

(a) Identify the concept used by Samir Gupta through which he was able to steer his company to greater heights.

(b) Also explain any three points of importance of this concept.   [4]

28.   Explain any Four factors which affect the determination of the price of the product.   [4]

OR

Explain the Four components of Physical Distribution.

SECTION - D

29.   Saurabh Jain set up a telecom business in Nasik, named as 'Ketone', with an ambitious target of reaching out to 90% of the Indian population within one year. He chose this business on the belief that the demand for data services will increase 4 times within the next 2-3 years . To fulfill such an

ambitious target, he had to either acquire an existing telecom business or collaborate or to go independent aggressively in the light of tough competition.

He assessed the proposals of different companies vis –a- vis earnings per share, tax liabilities, dividends paid etc., and their future projections, knowing fully well that the projections may change if the country's economic policies get modified.

The above paragraph discusses some of the steps of one of the functions of Management.

Explain the steps of the function identified from the above paragraph in chronological order by quoting the suitable lines. [5]

30. The principles of Taylor and Fayol are mutually complementary. One believed that management should not close its ears to constructive suggestions made by the employees while the other suggested that a good company should have an employee suggestion system whereby suggestions which result in substantial time or cost reduction should be rewarded.

Identify and explain the principles of Taylor and Fayol referred to in the above paragraph. [5]

OR

Name and explain with a suitable example the Technique of Scientific Management given by Taylor to differentiate between the efficient and the inefficient workers.

31. Return on Investment (ROI) of a company ranges between 10% to 12% for the past three years. To finance its future fixed capital needs, it has the following options for borrowing debt.

OPTION'A' : Rate of interest 9%

OPTION 'B' : Rate of interest 13%

(a) Which source of debt , 'Option A' or 'Option B', is better? Give reason in support of your answer.

(b) Also identify and explain the concept being used in taking the decision in (a) above.

(c) Explain any two factors that affect the choice of Capital Structure. [5]

OR

KJ Ltd., is manufacturing Trucks at its manufacturing unit in Kolkata. The Company has estimated a 20% increase in the demand of its Trucks. It is planning to set up a New Truck manufacturing unit. For this the Company will require approximately Rs. 2,000 crores as Fixed Capital and Rs. 500 crores as Working Capital. The Company has already arranged for its Fixed Capital. Explain any Five Factors that the Finance Manager of the Company should keep in mind while arranging for its Working Capital.

SECTION -- E

32. Kanya, a beauty products e-Commerce company, is diversifying into men's grooming. It is also tapping the demand for beauty products in the fashion industry and professionals such as make-up artists. As it diversifies its online presence, Kanya is also expanding its physical presence. They have 41 outlets across 18 cities presently and plan to expand to 180 outlets. Each store requires a capital expenditure of 60 – 80 lakh rupees. The company has decided to raise funds by issuing equity shares but not directly to the public, rather by offering them for sale through brokers.

Identify and briefly explain the method of floatation followed by the company. Also name and explain two other methods of floatation that can be used by the company for raising funds from the public, in the Primary Market. [6]

OR

Radhika got Rs. 10,00,000 after selling her parental property which she had got as a gift from her grand mother. Her friend advised her to invest in securities in the stock market. Radhika was unaware of the procedure for the same .Her friend introduced her to a stock broker, who was registered with National Stock Exchange. Radhika approached the broker. The broker guided her to open a DEMAT account with a Depositary, as well as a Bank account. Radhika opened a Bank account and DEMAT account with EXIN Bank.

(a) Identify the steps in the trading procedure for buying and selling of securities which have been discussed above.
(b) State the next four steps of the Trading Procedure.

33. 'Moga Industries Ltd.,' approached a well established university in the city of Madhurai to recruit qualified personnel for various technical and professional jobs. They selectedTanya, Ritu, Garima and Chetan for various vacancies in the organisation.

   After the selection and placement, 'Moga Industries Ltd., felt the need to increase the skills and abilities, and the development of positive attitude of the employees to perform their specific jobs better. The company also realised that learning new skills would improve the job performance of the employees. Hence, the company decided to take action for the same.
   (a) Name the step of the staffing process regarding which the company decided to take action.
   (b) State the benefits of the action to 'Moga Industries Ltd.'   [6]

34. What do you mean by Directing? Explain any five points of importance of Directing as a function of management.   [6]

OR

"Effectiveness of a manager depends on his / her ability to communicate effectively."Explain how?

(any 6 points)

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:- Political Science**
Time- 3 Hrs.   **M.M.-80**

General Instructions:-
a) All questions are compulsory.
b) Question nos. 1 to 20 carry 1 mark each. Answer should not exceed 20 wordeach.
c) Question nos. 21 to 23 carry 2 marks each. Answer should not exceed 40 words each.
d) Question nos. 24 to 27 carry 4 marks each.Answer should not exceed 100 words each.
e) Question nos. 28 to 30 carry 5 marks each. Two passage based questions and one picture based question.
   should not exceed 150 words each.
f) Question no 31 is a map –based question. Write its answers in your answer book.
g) Question nos. 32 to 34 carry 6 marks each. Each with an internal choice. Answer should not exceed
   150 words each.

SECTION-A

Q1.   In 1945 the Allied forces included the US_____ USSR and _____.

Q2.   Which event in 1989 led to the unification of Germany?

Q3.   Correct the statement and re write: -
       The first world was the communist countries and the third world was the capitalist countries.

Q4.   Name any two founder leaders of NAM?_____.

Q5.   Which state was carved out of Assam from the following- I. Meghalaya ii. Sikkimiii. Manipur iv
       Tripura.

Q6.   What was the main purpose of launching Operation Enduring freedom?

Q7.   The strategy of staying as far removed from the dominant power as possible is also known
       as--------------------.

Q8.   Informal, non-confrontationist and cooperative interaction among members of South East Asian
       Nations is also called-----------------.

Q9.   Identify the country--------where the Monarch worked to weed out militants and guerrillas from
       north-eastern India that operated in his country with a view to help India.

Q10.   Which of the following countries had an issue related to the migration of Rohingyas?
       a)Nepal   b)Bhutan   c)Myanmar   d)China

Q11.   Complete the sentence---
       The Rio Summit recommended a list of development practices called------

Q12.   The famous speech delivered by Jawahar Lal Nehru at the hour of midnight on 14-15 August, 1947 has
       come to be called as-------------

Q13.   Which institution has replaced the planning commission?

Q14.   Name the person with whom would you associate the following slogans?
       a.Aya Ram and Gaya Ram _____
       b.   Total Revolution _____

Q15. Select the correct option: -

The Grand Alliance of opposition of 1971

    a.   Got a combined tally of seats that was less than 40.

    b.   Had a clear ideological programme.

    c.   Had a grand finish in the 1970 elections.

    d.   Proved to be a grand success.

Q16. Select the correct option for the leader and the country that helped to reach the Tashkent agreement between India and Pakistan:

    a.   India, Nehru

    b.   USSR, Kosygin

    c.   Egypt, Nasser

    d.   Indonesia, Sukarno

Q17. Correct and rewrite the statement-----

Ravi, Beas river dispute was resolved between Himachal Pradesh, Punjab and Uttarakhand

Q18. Identify the organisation that brokered the Indus water treaty between India and Pakistan.

Q19. At the time of Independence, Indian leaders were committed to the aims of Liberty, Equality, Fraternity and _____.

Q20. Correct the following sentence and rewrite it--

On June 1977, Prime Minister Morarji Desai recommended the imposition of the emergency to GyaniZail Singh.

SECTION-B

Q21. Mention any two main objectives of the United Nations.

Q22. Highlight two arenas of Cold War along with example of each.

Q23. Explain with the help of an example the meaning of AntiCongressism.

SECTION-C

Q24. Describe the objectives of Iraq invasion by the US..

Q25. Highlight the role of Jawaharlal Nehru the first Prime Minister of India in the formation of India's foreign policy.

Q26. Analyse any four challenges faced by Election Commission of India before the first General Election.

OR

Which two models of modern development were there before India on the eve of independence? Which model did India decide to choose and why?

Q27. You are an important leader of Farmers' agitation. The Government authorities ask you to present any two demands on behalf of the farmers. On priority basis, which three demands will you make?Support your demands with appropriate arguments.

Q28. Study the given cartoon carefully and answer the questions that follow--

a)What does lion in the cartoon represent ?What does it believe ?

b)What does tiger in the cartoon represent? What is its demand?

c)Which country's problem is depicted here? Which dilemma of government is represented by this cartoon?

d)Name the external powers that helped to resolve issues.

Q29. Read the passage given below and answer the questions that follow:

The growing focus on environmental issues within the arena of global politics was firmly consolidated at the United Nations Conference on Environment and Development held at Rio de Janerio, Brazil in June 1992. This was also called the Earth Summit….What was obvious at the Rio Summit was the rich and the developed countries of the first world generally referred to as the "Global North" were pursuing a different environmental agenda than the poor and the developing countries of the III world called the "Global South"...The differences in their approach culminated into the adoption of the principle called

"Common but differentiated responsibilities."

a)How was the environmental concern of the first world different from that of the third world?

b)In what ways did the principle of "Common but differentiated responsibilities' help in addressing and overcoming the differences between the "Global North" and 'Global South"?   (2+3=5)

Q30. Read the given passage and answer the questions that follow:

"In the early years of independence, two contradictory tendencies were already well advanced inside the Congress Party. On the other hand, the national party executive endorsed socialist principles of state ownership, regulation and control over key sectors of the economy in order to improve productivity and at the same time curb economic concentration. On the other hand, the national Congress government pursued liberal economic policies and incentives to private investment that was justified in terms of sole criterion of achieving maximum increase in production". Francine Frankel

a)What concept of planning was finally adopted by India ?

b)In order to improve productivity which principles were endorsed by the national party.

c)Do you agree - that there was a contradiction between the central leadership of the Congress party and its state level leaders. Justify your answer.   (1+2+2=5)

Pg- 3 of 4

Q31.
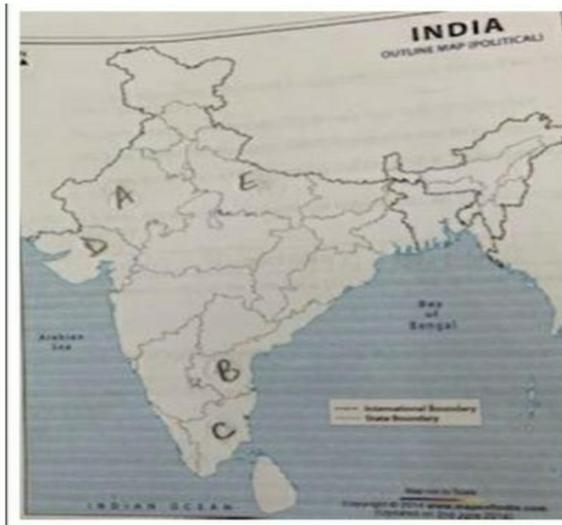
In the given outline political map of India five states have been marked as (A) (B) (C)(D) and (E). Identify these states on the basis of the information given below and write their correct names in your answer book.

(i)   The state where women put a ban on the sale of arrack and stopped its auction.

(ii)   The state where there was anti Hindi agitation in 1965.

(iii)The state where the MKSS demanded records for famine relief and accounts of labours.

(iv)   The state where the SardarSarovar dam is located.

(v)   The state which saw a farmers agitation in 1988 protesting against the governments
         increased electricity rates.

SECTION-E

Q32.   Critically evaluate the role of the UNO in a Unipolar world. Is it still relevant? How?

OR

Examine the role of traditional notion of security in the contemporary world.

Q33   Identify the two power blocs by emphasising their role during the Cuban missile crisis.

OR

Compare and contrast the "shock therapy "of the USSR with "'the open door' policy of China.

Q34.   "The split of Congress in 1969 was inevitable." Elaborate.

OR

"Government that are seen to be unstable, quarrelsome and divisive have been severely punished". Elucidate giving examples from 1975-1977

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:- Chemistry**
**Time- 3 Hrs.**   **M.M.-70**

<u>General Instructions:-</u>

1. *All questions are compulsory.*

2. *There are 37 questions.*

3. *Section A: Q.no. 1 to 20 are very short answer questions (objective type) and carry 1 mark each.*

4. *Section B: Q.no. 21 to 27 are short answer questions and carry 2 marks each.*

5. *Section C: Q.no. 28 to 34 are long answer questions and carry 3 marks each.*

6. *Section D: Q.no. 35 to 37 are also long answer questions and carry 5 marks each.*

7. *There is no overall choice. However an internal choice has been provided in two questions of two marks, two questions of three marks and all the three questions of five marks weightage. You have to attempt only one of the choices in such questions.*

8. *Use log tables if necessary, use of calculators is not allowed.*

SECTION – A

1.   How many layers adsorbed in chemisorptions?   [1]

(a) Zero   (b) Many   (c) One   (d) Two

2.   4 Litre of 0.02 M aqueous solution of NaCl was diluted by adding one litre of water. The molality of the resultant solution is ……………..   [1]

(a) 0.004   (b) 0.008   (c) 0.012   (d) 0.016

3.   According to Arrhenius equation , rate constant K is equal to $A.e^{-Ea/RT}$. Which of the following option represents the graphs of $ln\ k$ vs $\frac{1}{T}$?   [1]
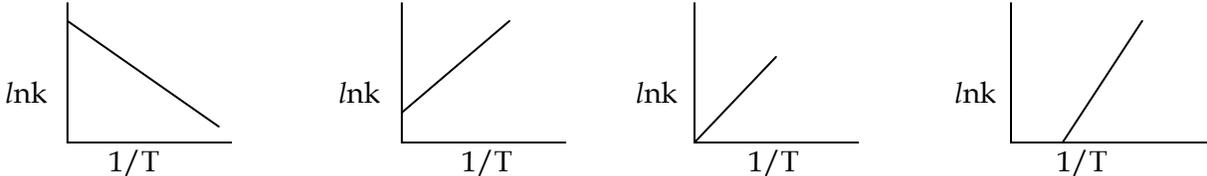
4.   Aluminothermite process is used for the extraction of metals, whose oxides are –   [1]

(a) fusible   (b) not easily reduced by carbon
(c) not easily reduced by hydrogen   (d) strongly basic

Pg – 1 of 5

5. Chlorine reacts with excess of NH_3 to give ……………. [1]
   (a) NH_4Cl (b) N_2+HCl (c) $N_2+ NH_4Cl$ (d) NCl_3+HCl

6. Write the IUPAC name of compound given below: [1]

   $CH_3 – CH_2 – C = C – OH$

           CH_3 CH_2OH

7. Under what condition glucose is converted into gluconic and saccharic acid? [1]

8. Write the reaction of aliphatic primary amine with nitrous acid. [1]

9. In Kolbe's reaction, phenoxide ion is treated with CO_2 instead of phenol. Why? [1]

10. Why is alternating current used for measuring resistance of an electrolytic solution? [1]

11. Although carbon and hydrogen are better reducing agents but they are not used to reduce metallic oxide at high temperature . Why? [1]

12. Coordination compounds are used as catalyst for many industrial processes. One such catalyst is Wilkinson catalyst used for hydrogenation of alkene. Write its structural formula. [1]

13. How are metals used as semiconductors refined? What is the principle of the method used? [1]

14. When chloromethane reacts with excess of ammonia gas, name the compound mainly formed? [1]

15. How do you explain the absence of aldehydic group in the pentaacetate of D-glucose? [1]

16. Why can arylhalides not be prepared by reaction of phenol with HCl in the presence anhydrous $ZnCl_2$? [1]

17. Can enzyme be called a polynomer? Justify. [1]

18. Cyanide ion acts as ambident nucleophile in aqueous medium. Give reason to support your answer. [1]

19. What is the scientific explanation for the feeling of depression? [1]

20. What is meant by broad spectrum antibiotics? Give one example. [1]

SECTION - B

21. Why is mass determined by measuring a colligative property in case of solute abnormal? Explain by giving suitable example. [2]

22. A secondary cell which is used in automobile and inverter is lead storage battery. Write the cell reaction when the battery is in use. [2]

OR

Write the name of the cell which in used in transistors . Give the reaction taking place at anode and cathode of the cell.

23. (a) What type of colloid is formed when a liquid is dispersed in a solid? [2]
    (b) How is the existence of charge on colloidal particle is confirmed?

24. Write the main product formed – [2]
    (a) when tert-butyl alcohol reacts with aluminium metal.
    (b) n-propyl chloride reacts with sodium iodide in the presence of acetone.

Pg – 2 of 5

25. Define : (a) Coagulating value [2]
              (b) Selectivity of a catalyst.

OR

What is an adsorption isotherm? Describe Freundlich adsorption isotherm.

26. Write the basic difference between chain growth polymerisation and step growth polymerisation. [2]

27. (i) Why can not vitamin C be stored in our body? [2]

(ii) What are essential amino acids? Give one example.

SECTION – C

28. Calculate the boiling point of a solution when 40 gm of potassium chloride (molar mass 74.5 g mol^{-1}) was dissolved in 50 gm of H_2O, assuming potassium chloride to be 92% ionised. [3]

(Given K_b for H_2O = 0.52 k Kg mol^{-1} .

OR

A solution is prepared by dissolving 8.95 mg of a gene fragment in 35 ml of water has an osmotic pressure of 0.335 torr at 25^{0}C. Calculate its molar mass. (Assume gene fragment is a non-electrolyte).

29. (i) Write IUPAC name of coordination isomer of the following :- [3]

$[(Co(en)_3] \ [Cr (CN)_6]$

(ii) Predict the number of unpaired electrons in the square planar $[Pt (CN)_4]^{2-}$ ion .
        (At. No. – pt = 78)

(iii) Discuss the nature of bonding in hexa ammine cobalt (III) ion on the basis of valence bond theory.

(cobalt = Z = 27)

30. Account for the following : - [3]

(a) Oxygen is a gas but sulphur is a solid. Why?

(b) ICl is more reactive than I_2. Why?

(c) Why is helium gas used in diving apparatus?

31. Calculate emf of the following cell at 298 K. [3]

2Cr (s) + 3 Fe^{2+} (0.001M) $\longrightarrow$ 2 Cr^{3+} (0.01 M) + 3Fe$_{(s)}$

Given : $E^0{}_{Cr^{+3}/Cr}$ = - 0.74 V , $E^0{}_{Fe^{+2}/Fe}$ = - 0.44 V

32. Identify A, B and C in the following reactions. [3]

CH$_3$ – C – OH $\xrightarrow[\Delta]{NH_3}$ Ⓐ $\xrightarrow{NaOBr}$ Ⓑ $\xrightarrow{NaNO_2/HCl}$

33. (i) Draw the shape of HClO$_4$. [3]

(ii) Give the partial hydrolysis reaction of XeF$_6$ with H_2O.

(iii) Complete the reaction :   C +H$_2$SO$_4$ $\longrightarrow$

OR

(i) How is chlorine gas manufactured? Describe the process.

(ii) By providing Chemical reaction give the preparation of HCl in laboratory.

34. (i) H_2SO_4 is not used during the reaction of alcohol with KI. Why?   [3]

(ii) Bring out the following conversion:-

   (a) Ethanol to but-1-yne.

   (b) Propyne to acetone.

SECTION - D

35. (i) For the reaction A→ B , the rate of reaction becomes three times when the concentration of A is increased by nine time. Find the order of reaction.

(ii) For the first order thermal decomposition reaction, the following data were obtained.

   C_2H_5Cl (g) $\longrightarrow$ C_2H_4 (g) + HCl

Time/Sec	Total Pressure /atom
0	0.30
300	0.50

Calculate the rate constant.   [5]

OR

(i) The rate constant for a first order reaction is $60\ sec^{-1}$. How much time will it take to reduce the initial concentration of the reactant to its 1/16th value?

(ii) The first order rate constant for the decomposition of ethyliodide by the reaction :

   C_2H_5I (g) → C_2H_4 (g) + $HI_{(g)}$

   at 600 k is 1.6 x $10^{-5}\ sec^{-1}$. Its energy of activation is 209 KJ/mol. Calculate the rate constant of the reaction at 700 K.

36. (a) When a chromite ore (A) is fused with an aqueous solution of sodium carbonate in free excess of air, a yellow solution of compound (B) is obtained. This solution is filtered and acidified with sulphuric acid to give a compound (C). Compound C on treatment with solution of KCl give orange crystal of compound D. Write the chemical formulae of compounds A to D.

(b) The chromates and dichromate are inter convertible in aqueous solution depending upon P^H of solution. Show it by giving reactions.   [5]

OR

Pg – 4 of 5

What happens when : -

(i) MnO_4^{2-} ion undergoes disproportionation reaction in acidic medium.

(ii) Actinoids exhibits greater range of oxidation states. Why ?

(iii) Many transitions metals and their compounds acts as a good catalyst. Why?

(iv) E^0 M^{2+}/M values are not regular for first row transition metals (3d series) why?

(v) Zirconium (z=40) and hafnium (z = 72) have almost similar atomic radii. Why?

37.   Give reasons: [5]

(i) Carboxylic acids are higher boiling liquids than alcohols.

(ii) Ethanal is more reactive than acetone toward nucleophilic addition reaction.

(iii) $(CH_3)_3$ C – CHO does not undergo. Aldol –condensation reaction.

(iv) Write a test to differentiate between pentan-2-one and pentan-3-one.

(v) Give the structure (Draw) of 2,4 – dinitrophenyl hydrazone of benzaldehyde.

OR

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

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DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:- Physics**
Time- 3 Hrs.   **M.M.-70**

General Instructions:-

1. All questions are compulsory. There are 37 questions in all.
2. This question paper has four sections: Section A, Section B, Section C and Section D.
3. Section A contains **twenty** questions of one mark each, Section B contains **seven** questions of two marks each, Section C contains **seven** questions of three marks each, and Section D contains **three** questions of five marks each.
4. There is no overall choice. However, internal choices have been provided in two questions of one mark , two questions of two marks, one question of three marks and three questions of five marks weightage. You have to attempt only one of the choices in such questions.

Section - A

1. N identical capacitors joined in parallel are charged to a common potential V. The battery is disconnected. Now the capacitors are separated and joined in series. For the new combination [1]

   (a) energy and potential both will become N times.
   (b) energy will remain same potential difference will become N Times.
   (c) energy will become N times, potential difference will remain V.
   (d) None of these.

2. Two bulbs each marked 100 W 220 V are connected in series across 110 V supply. The power consumed by them, when lit is [1]
   (a) 200 watt   (b) 100 watt   (c) 12.5 watt   (d) None of these

3. An electron is projected with uniform velocity along the axis of current carrying solenoid. Which of the following is true? [1]
   (a) The electron will be accelerated along the axis.
   (b) The electron will move on circular path about the axis.
   (c) The electron will continue to move with uniform velocity along the axis of solenoid.
   (d) None of these

4. The final image formed in an astronomical refracting telescope with respect to the object is [1]
   (a) real and inverted   (b) real and erect   (c) virtual and erect   (d) virtual and inverted.

5. The refractive index of medium is $\sqrt{3}$. What is the angle of refraction if the unpolarised light is incident on it at the polarizing angle of the medium? [1]

   (a) 90^0 (b) 60^0 (c) 30^0 (d) None of these

6. An infinite line charge produces an electric field of 9×10^4 NC^{-1} at a distance of 2 cm. What is its linear charge density? [1]

   (a) 10^{-5} Cm^{-1} (b) 10^{-6} Cm^{-1} (c) 10^{-7} Cm^{-1} (d) 10^{-6} Cm^{-1}

7. The self inductance of an air cored solenoid of N turns is 1 mH. The self inductance of another solenoid with N/2 turns (with the same length and area of cross section) with a core having relative permeability 500 is [1]

   (a) 100 mH   (b) 125 mH   (c) 60 mH   (d) None of these

8. The no. of photo electrons emitted for light of frequency is proportional to [1]
   (a) threshold frequency   (b) intensity of light
   (c) frequency of light   (d) None of these

9. For a radioactive material half life is 10 minutes. If initially there are 600 nuclei, the time taken for disintegration of 450 nuclei is [1]

   (a) 30 min   (b) 10 min   (c) 20 min   (d) 15 min

10. In the given circuit, the p-n junction diode is ideal with a negligible forward resistance and infinite reverse resistance . The current in the circuit is [1]

    (a) 2mA   (b) 1 mA   (c) 0.5 mA   (d) zero

11. Horizontal and vertical components of earth's magnetic field at a place are equal. The angle of dip at the place is ……………… . [1]

    OR

    A free floating magnetic needle at North pole is ………….. to the surface of earth.

12. Electromagnetic waves can be produced by ………….. a charge particle. [1]

13. An equilateral prism is made up of material of refractive index $\sqrt{3}$. The angle of minimum deviation of light passing through the prism is …………….. . [1]

14. Energy of an electron in first excited state in hydrogen atom is – 3.4 eV. The Kinetic energy of the electron in ground state is …………. [1]

15. Semiconductor with band gap close to ………….. eV are ideal material for solar cell frabrication. [1]

16. Draw a pattern of electric field lines when a point charge – Q is kept near an uncharged conducting plate. [1]

17. The power factor of an AC circuit is 0.5. What is the phase difference between voltage and current in the circuit? [1]

18. An electron and proton have same kinetic energy. Which one of the two has the larger de Broglie wave length and why? [1]

    OR

    What is the physical significance of Davisson and German Experiment?

19. Four nuclei of an element undergo fusion to a form a heavier nucleus. Which of the two the parent or daughter nucleus would have higher value of binding energy/nucleon. [1]

20. Zener diode is used in reverse bias. When its reverse bias is increased, how does the thickness of depletion layer change? [1]

<u>**Section - B**</u>

21. An electric dipole is held in uniform electric field. [2]

   (i) Show that net force acting on it is zero.

   (ii) The dipole is aligned parallel to the field. Find the work done in rotating it through an angle of 180^0 .

22. A 10 V cell of internal resistance 1Ω is charged by a 200 V battery and the circuit is having a series resistor of 37Ω. Find the value of current in the circuit and the potential difference across the 10 volt cell. [2]

23. An alternative voltage $E=E_0 \sin \omega t$ is applied to a circuit containing a resistor R connected in series with a black box. The current in the circuit is found to be $I = I_0 \sin (\omega t + \frac{\pi}{4})$.

   (i) Identify the element in the black box.
   (ii) Draw the corresponding phasor diagram and find the impedance in terms of R. [2]

OR

Show that the time period of oscillations of a freely suspended magnetic dipole of magnetic moment M in uniform magnetic field B is given by $T = \sqrt{\frac{I}{MB}}$, where I is moment of Inertia of the dipole.

24. What is Brewster's angle? Derive relation between Brewster's angle and refractive index of the medium which produces plane polarized light. [2]

25. (a) Draw a graph showing variation of photocurrent with anode potential for a particular intensity of incident radiation.
    Mark saturation current and stopping potential.
    (b) How much would stopping potential for a given photo-sensitive surface go up if the frequency of incident radiation is increased from 4×10^{15} Hz to 8×10^{15}Hz. [2]

26. Derive an expression for radius of nth Bohr's orbit in hydrogen atom. [2]

OR

Determine the distance of closest approach when an alpha particle of kinetic energy 4.5 MeV strikes a nucleus of Z = 80 , stops and reverses its direction.

27. Energy gap in a p-n junction photodiode is 2.8 eV. Can it detect a wavelength of 6000 nm? Justify your answer. [2]

28. In the given circuit in the steady state, obtain the expression for [3]
    (a) potential drop   (b) the charge and   (c) the energy stored in the capacitor C

29. A uniform magnetic field $\vec{B}$ is setup along positive x axis. A particle of charge q and mass m moving with a velocity $\vec{v}$ enters the field at the origin in X-Y plane such that it has velocity components both along and perpendicular to the magnetic field $\vec{B}$. Trace, giving reason the trajectory followed by the particle. Find out the expression for the distance moved by the particle along the magnetic field in one revolution. [3]

30. Obtain the resonant frequency and Q factor of a series LCR circuit with L = 3H, C=27μF, R = 7.4Ω. It is desired to improve the sharpness of resonance of circuit by reducing its full width at half maximum by a factor of 2. Suggest a suitable way. [3]

31. Draw a ray diagram to show the formation of real image of an object placed in front of a converging lens. Using this ray diagram establish a relation between u, v and f for this lens, where symbols have their usual meaning. [3]

32. Define resolving power of an astronomical refracting type telescope and write expression for it. Assume that light of wavelength 6000 A^0 is coming from a star, what is the limit of resolution of a telescope whose objective has a diameter of 2.54 m . [3]

33. (a) Draw a graph showing the variation of Binding Energy per nucleon with mass number. Using this graph explain why does heavier nucleus undergo nuclear fission.
    (b) What characteristic property of nuclear force explains the constancy of binding energy per nucleon (B.E/A) in the range of mass number A lying 30<A <170? [3]

OR

Show that $^{238}_{92}U$ cannot spontaneously emit a proton.

$^{238}_{92}U$ = 238.05079 u $^{237}_{91}Pa$ = 237.05121 u $^{1}_{1}H$ = 1.00783 u

34. Using the necessary circuit diagram, show how V-I characteristics of a p-n junction are obtained in
    (i) forward biasing (ii) reverse biasing. [3]
    Why is the current under reverse bias almost independent of
    the applied potential up to a breakdown voltage?

Section - D

35.   (a) Derive an expression for energy stored in a parallel plate capacitor C, charged to a potential difference V. Hence obtain an expression for energy density of a capacitor.
(b) The electric field components in the following figure are $E_x = \alpha x$, $E_y = 0$, $E_z = 0$; in which
α = 400 N/Cm. The electric field is directly along positive X axis. Calculate the
(i) electric flux through the cube and (ii) the charge within the cube, assume that a=0.1m.   [5]

OR

(a) State the principle of working of a potentiometer.
(b) Give the circuit diagram and working formula to measure the internal resistance of a cell using a potentiometer .
(c) In the circuit diagram shown, AB is a uniform wire of resistance 15Ω and length 1 m. It is connected to cell E_1 of emf 2V having negligible internal resistance and external resistance R. The balance point of another cell E_2 of emf 75 mV is found at 30 cm from end A. Calculate the value for resistance R.

36.   (a) Two identical circular loops P and Q each of radius 5 cm are lying in perpendicular planes such that they have a common centre. Find the magnitude of magnetic field at the common centre of two coils, if they carry currents equal to 3A and 4A respectively.
(b) Derive an expression for the force per unit length between two long straight parallel conductors carrying current in the some direction. Hence define SI unit of current.   [5]

OR

(a) What are eddy currents? In what sense eddy currents are considered undesirable in a transformer? How can they be minimized?
(b) A conducting rod of length l with one end pivoted is rotated in a vertical plane, perpendicular to a uniform magnetic field B. Deduce an expression for the emf induced across the ends of the rod.

37. What are coherent sources of light? Sketch the experimental arrangement of Young's double slit experiment and using it obtain the expression for path difference and fringe width.

How does the fringe width of interference fringes change, when whole apparatus of the experiment is kept in water? [5]

OR

(a) Mention four differences between the phenomenon of interference and diffraction of light.

(b) Two wavelengths of sodium light 590 nm and 596 nm are used in turn to study the diffraction taking place at a single slit of width 2×10^{-4} m. The distance between the slit and screen is 1.5 m. Calculate the separation between positions of first maximum of the diffraction pattern obtained in two cases.

(c) How does width of central maximum in single slit experiment change when width of slit is increased?

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   Subject:- English
Time- 3 Hrs.   M.M.-80

<div align="center">

Section-A Reading   **20marks**

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A1.   Read the following passage carefully-   12 Marks

1. You would have seen an increasing amount of "junk mail" showing up in your e-mail box. The so–called harmless activities of a small number of people are increasingly becoming a serious problem for the Internet.

2. Spam is the flooding of the Internet with many copies of the same message, in an attempt to force the message on people who would not otherwise choose to receive it.

3. Spam is basically electronically junk mail or junk newsgroup postings. It is sometimes confused with any unsolicited e–mail. But an old friend may also find your e-mail address on the net and send you a message but this could hardly be called spam, even though it is unsolicited. Real spam is generally e-mail advertising for some products sent to a mailing list or newsgroup.

4. In addition to wasting people's time with unwanted e-mail , spam also eats up a lot of network bandwidth. There are many organizations and individuals who have taken it upon themselves to fight spam with a variety of techniques. The problem is that because the Internet is public, there is very little that can be done to prevent spam, just as it is impossible to prevent junk mail.

5. One of the most recent examples of large –scale spamming was the hoax Ericsson e-mail about a free give away, something most people just cannot resist. The letter begins with a claim that since Nokia is giving away telephones, Ericsson will respond by giving away brand new WAP phone. But the recipient must forward the letter to a minimum of 20 people to receive the phone. The letter is signed by Anna Swelund, Executive Promotion Manager for Ericsson Marketing. It was later discovered that there was no such person at Ericsson.

6. There are numerous instances of these e-mails being used maliciously by someone who has a grudge against an ex-spouse, a public official, a former teacher or someone else with an e-mail address. The person mentioned in the e-mail ends up with thousands of requests from people looking for confirmation that the e-mail – which they actually had nothing to do with – is true. Spamming works on our own greed to receive freebies. You are instructed by a stranger to forward a message you know nothing about , except for the fact that maybe a friend passed it to you and about 90 of their other very close friends.

7. Very often the victim can receive so many e-mails (and sometimes faxes and phone calls in the more malicious cases) that they have to get a new e-mail box or phone number – thereby ruining established personal and professional communication channels, which was the original intent of the sender.

8. Most spam is commercial advertising , often for dubious products, get – rich quick schemes or quasi-legal services. It costs the sender very little to send- most of the costs are paid for by the recipient or the carriers rather than by the sender.

9. There are two main types of spam, and they have different effects on internet users. Cancellable usenet spam is a single message sent to 20 or more usenet newsgroups. Usenet spam is aimed at "lurkers", people who read newsgroups but rarely or never post and give their address away. Usenet spam robs users of the utility of the newsgroups by overwhelming them with a barrage of advertising or other irrelevant posts. Furthermore usenet spam subverts the ability of system administrators and owners to manage the topics they accept on their systems.

10. E-mail spam targets individual users with direct mail messages. They typically cost users money out- of-pocket to receive. Most of us read or receive our mail through dial-up accounts while the meter is running, so to speak.

11.There is not much really that can be done to protect yourself except that you can ensure your relative safety by creating internet e-mail accounts like Hotmail or Yahoo which can be easily and frequently changed. Further, these accounts also generally offer the option of blocking senders from whom you get spam and you can also opt to block e-mail which has been coped to more than 20 people.

12.One can also keep oneself informed about spammers through the Blacklist of Internet Advertisers, a popular report that describes the offending activities of spammers that routinely distribute large mailings via e-mail or post unwelcome advertising on newsgroups . You can also visit www.spam.about.net.

13. Another organization devoted to countering the destructive effects of spam is MAPS or Mail Abuse Prevention System. If an offending spammer cannot be shutdown, the spammer's ISP may contact MAPS with the subnet addresses allocated to the spammer so those specific addresses may be used instead of the IP address of the entire ISP.

1.1 **On the basis of your reading of the above passage answer each of the questions given below by choosing the most appropriate option:** **[1x5=5]**

(a) Email spam victimises ……………..

    (i) group   (ii) individuals   (iii) organization   (iv) none of the above

(b) Usenet spam deprives the users of ………..

    (i) the utility of the newsgroups   (ii) net facility

    (iii) actual information   (iv) none of the above

(c) Name the organization that counters the devastating effects of spam ………….

    (i) MASP   (ii) MAPS   (iii) MPAS   (iv) MSAP

(d) Who has to pay most of the costs of spam?

    (i) Senders   (ii) Receivers   (iii) Carriers   (iv) Either (ii) or (iii)

(e) Spams are ………..mails.

    (i) solicited   (ii) unsolicited   (iii) single copy   (iv) coloured

1.2 **Answer the following questions briefly:** **[1x5=5]**

(a) What is spam? What problems are caused to net surfers by spamming?

(b) Give an example of recent large scale spamming.

(c) How does spamming work? Whom does it hit- sender or receiver?

(d) What are the two main types of spams and their effects on internet users?

(e) How can one protect oneself against spam? Give two options.

1.3 **Pick out the words from the passage which are similar in meaning to the following :- [1x2=2]**

(a) mischievious trick played on somebody for a joke (para 5)

(b) disreputable or risky (para 8)

2. **Read the passage given below and answer the questions that follow:** **[8 marks]**

1. Scientists in the USA and Japan are developing a set of smart materials that can clean themselves off dirt and stains besides eliminating foul odours and dangerous bacteria.

2. Exploiting powerful catalytic properties, researchers succeeded in creating tiles,glass, paint, paper and cloth that can keep themselves sparkling clean.

3. The first item to reach the market, a self cleaning wall and counter tile, can not only kill bacteria but also eliminate odours and staining associated with smoke from cooking oils and cigarettes, reports the journal Technology Review.

4. The key to the self-cleaning world of the future is the interaction between titanium dioxide and ultraviolet rays from the sun or fluorescent lights . The special properties of titanium dioxide- a substance used to make paint and tooth –paste white – were first discovered by Tokyo University chemist Akira Fujishima and Associates in 1969. Their research showed that when exposed to solar energy, titanium dioxide has the ability to break down water into hydrogen and oxygen.

5. After a quarter - century of observation, scientists now understand that the reaction occurs as titanium dioxide absorbs energy from the UV band of sunlight and reacts with watervapour

in the air to produce oxygen molecules. These molecules are energetic enough to break down organic matter into carbon dioxide and trace elements.

6. "When light shines on the white paint pigment, titanium dioxide, it produces an active form of oxygen that can burn combustible material at room temperature, "says David Ollis Professor of Chemical Engineering at North Carolina State University, "It is a fire without a flame."

7. Scientists have discovered that titanium dioxide-coated materials can easily remove thin deposits such as bacteria and finger prints, though they are unable to break down thick splotches of organic materials-such as blood stains – because light and oxygen in the air cannot reach the surface where the reaction occurs.

8.Fujishima says that when titanium –dioxide tiles were used in the operating rooms and bathrooms of Ako Central Hospital in Ako, Japan, they killed 99.9 percent of bacteria on their surface . Included among them were penicillin-resistants Staphylococcus and other germs that can cause secondary infections among patients.

9. The tiles-marketed by Japan's Toto Corp under the name Neo Clean – remain effective even though they are coated with a layer of titanium dioxide only one micron thick, about one-fiftieth the diameter of a human hair. Once the fine layer of compound is permanently affixed – it is commonly sprayed and then baked onto the tile's surface – the company says it is resistant to the abrasion of ordinary scrubbing that might be needed for thicker stains .Moreover , because titanium dioxide acts only as a catalyst for the photochemical reaction, it theoretically never gets used up.

10. While cleaning time varies with the thickness of the deposit, Adam Heller, a professor of Chemistry at the University of Texas at Austin, says his experiment shows that titanium dioxide- treated glass removed fingerprints in about two hours. This glass, versions of which both Heller and Fujishima have developed, could be made reactive on both sides, making it ideal for everything from sky –scraper windows to car window glass.

11. But the most promising self-cleaning product is likely to be a wash-itself paint. Both the Texas and the Tokyo laboratories have demonstrated the self-cleaning capacities of paints containing titanium dioxide. While they are not saying exactly how they did it, both claim to have overcome an intrinsic problem in which titanium dioxide breaks down materials that bind pigments in coloured paints.

A. On the basis of your understanding of the above passage, make notes on it using headings and subheadings. Use recognizable abbreviations wherever necessary (minimum 4) and also supply an appropriate title to it.   [4]

B. Write a summary of the passage in about 80 words.   [4]

Section – B (Advanced Writing Skills)   **30 Marks**

3.   You are the Regional Manager of Lord Krishna Bank, Sikkim . As your bank is introducing 24 hours banking facility for its customers, some Automatic Teller Machines are being installed in certain localities. Write an advertisement to be published in the classified columns of a newspaper for suitable places/space on rent to be used as ATM centres for the company. (Word limit - 50)   [4]

OR

You are the Cultural Secretary of your school. Design a poster inviting people for the screening of a play "Kya Mera Kal Aisa Hoga!" for creating awareness about treating elders with proper love, respect and care. (Word limit - 50)

4.   Last month, you went to Ooty and stayed at Hotel Green View for a week. Within two days you found that the facilities provided were not good and you had to leave the hotel. After reaching home at Chennai you decided to write a letter of complaint to the manager describing all that went wrong there and demand a refund of the money paid in advance. Write the letter in 120-150 words. You are Aman /Amna.   [6]

OR

As a citizen of India, You find that the Government's odd-even formula did not reduce the pollution to the extent that it helped in the de-congestion of the traffic on the roads. It was a laudable effort nevertheless . Write a letter to the Editor of a National daily expressing your views on the initiative. Also give suggestions on how vehicular pollution on Delhi Roads can be reduced. You are Tina/Tarun Gautam of 14, Barkhamba Road, New Delhi. (Word limit - 120-150)

5.   Recently you attended a Career Fair organized by your school in which various renowned Foreign Universities participated and gave information about their undergraduate and graduate programmes. Write a newspaper report in about 150-200 words about the fair. You are Arunima/Arun.   [10]

OR

These days people live a hectic life and hardly get time to interact with each other. Most of their free time goes in interacting online. The real social interaction has got lost somewhere. Write an article in 150-200 words expressing your views and suggesting measures to change the situation. You are Bhavya/Bhawan.

6.   "Academic excellence is the only requirement for a successful career". Write a debate in 150-200 words either for or against the motion. (Word limit 150-200)   [10]

OR

You have been asked by your House Warden to prepare a speech on the topic 'Community Services once a month should be introduced in all schools and should be graded.'

Write the speech in about 150-200 words.

Section – C (Literature: Text Books)   **30 Marks**

7.   Read the extracts given below and answer the questions that follow :   [4x2=8]

7.1   When aunt is dead, her terrified hands will lie
        still ringed with ordeals she was mastered by
        the tigers in the panel that she made
        will go on prancing proud and unafraid.

(a) Why are Aunt Jennifer's hands 'terrified'?
(b) What is Aunt Jennifer's death symbolic of? Is the society any way affected by her death?
(c) What does 'ringed with ordeals' imply?
(d) What will happen to her 'tigers' after her death?

7.2 Instead of the sour faces which ordinarily met him, the owner who was an old man without wife or child was happy to get someone to talk to in his loneliness.

(a) Who has been referred as 'the owner' in the above extract?
(b) How did one addressed as 'the owner' treat the peddler?
(c) Why was the owner of the house happy to meet the peddler?
(d) How had other people treated the peddler in the past?

8.   Answer any five of the following questions in 30 – 40 words each.   [2x5=10]

(i) Why does the poet urge the authorities to make the classroom 'map' the children's 'window' to the outer world?

(ii) Which other sphere besides political or economic fields received GandhiJi's attention during his long stay in Champaran?

 (iii) "Mr. Hamel's reaction when Franz could not answer a question on participles was unlike what he had expected". Justify.

(iv)'The future of the slum dwellers in Firozabad is as bleak as their present', why does the author feel so?

(v) Who was the man bleeding in the cell? What was he doing?
(vi) How did Mr. Lamb react to Derry viewing himself differently?
(vii) Describe the world inside the car and compare it to the activities taking place outside, referring to "My Mother at Sixty Six".

 9.   Answer the following questions in 120-150 words.   [6]
Sophie was a dreamer. The lesson "Going Places"reminds us that mere dreams will not help us to accomplish anything. What qualities do you think, would help Sophie to realise her dream?

OR

What impression do you form about Umberto Eco as a scholar and writer on the basis of 'The Interview'?

10.   Answer the following questions in 120-150 words.   [6]

'It may take a long time for oppression to be resisted, but the seeds of rebellion are sown early in life',Do you agree that injustice in any form cannot escape being noticed even by children?

Express your opinion referring to chapter 'Memories of childhood.'

OR

'Good human values are far above any other value system', How did Dr. Sadao succeed as a doctor as well as a patriot?

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:- Accountancy**

Time- 3 Hrs.   **M.M.-80**

General Instructions :

(i) This question paper contains two parts – A and B.

(ii) Part A is compulsory for all.

(iii) Part B has two options – Analysis of Financial Statements and Computerised Accounting.

(iv) Attempt only one option of Part B.

(v) All parts of a question should be attempted at one place.

PART – A

ACCOUNTING FOR THE NOT FOR PROFIT
ORGANIZATIONS, PARTNERSHIP FIRMS
AND COMPANIES

1. Show how Buildings Fund will be dealt with in the Financial Statement of Delhi Football Association.

	Rs.	[1]
Balance of Building Fund	10,00,000	
Donation Received for Building	12,00,000	
Expenditure incurred on		
Construction of Building (Sports Room)	9,00,000	

2. Match the following :-   [1]

Group – A	Group – B
(i) Dissolution of Firm	(a) Appear in Balance Sheet
(ii) Credit balance in Realisatoin.	(b) Realisation Account
(iii) Reserve Fund for Distribution	(c) gain on Realisaton

3.   X and Y are Partner in a firm not having a Partnership Deed. X spends twice the time that Y devotes to business , X claims that he should get a salary of Rs. 10,000 per month for his extra time spent Y does not want to give anay salary. State who is correct and why?   [1]

4. Ajay , Bhawna , and Shreya were partners sharing profits in the ratio of 2:2:1 on 1st July 2019 Shreya died. The books of accounts are closed on 31st March every year. Sale for the year 2018-19 was Rs. 5,00,000 and that from 1st April to 30th June 2019 was Rs. 1,40,000. The rate of Profit during the past three years had been 20% on sales which shall be on the basis to calculate shreya's share of profit. Calculate shreya's share of Profit –till the date of her death and pass necessary journal entry for the same.

5.   Give the journal entry to distribution "workman compensation reserve of Rs. 50,000 at the time of admission of Z. When there is no claim against it. The firm has two partner's X and Y.   [1]

6. X , Y and Z are partners sharing profits in the ratio of 3:2:1 , Y retired from the firm. New profit sharing ratio is decided to be 5:1 for the adjustment of goodwill Accountant has Calculated gaining ratio as 2:3. Is the accountant correct?   [1]

7. On Admission of a partner, his share of goodwill is Rs. 1,00,000 brought by Anil, a new partner as his share, which he gains equally from Samay and Suraj.   [1]

8. Closing entry for Interest on Drawing Account is   [1]
    Interest on Drawings Account ……… Dr.
            To Profit and Loss Appropriation A/c

9. A and B are partner's sharing profits in the ratio of 5:3, they admitted C giving him $3/10^{th}$ share of profits. It C takes $1/5^{th}$ share from A and $1/10^{th}$ from B their new profit sharing ratio will be
    (a) 5:6:3
    (b) 2:4:6
    (c) 18:24:38
    (d) 17:11:12   [1]

10. X Ltd forfeited 50 shares of Rs. 100 each issued at 10% premium on which allotment money of Rs. 30 per share (including premium) and first call of Rs. 30 per share (including premium) were not received. Second and Final call of Rs. 20 per share was not yet made. If 20 of these shares were reissued at Rs. 70 per share as fully paid-up, the gain on reissue is
    (a) Rs. 1500
    (b) Rs. 1300
    (c) Rs. 900
    (d) Rs. Nil   [1]

11. When interest on Capital is allowed to partners Interest on Capital Account is debited and Partners Capital Account are credited. It is called.
    (a) an opening entry
    (b) a closing entry
    (c) an adjusting entry
    (d) a transfer entry   [1]

12. Interest on Debenture is paid only in that year when the company earns profit. Is the statement correct?

13. A, B and C entered into a partnership. On 1st October 2018 to share profits and losses in the ratio of 3:2:1 . A personally guaranteed that C is share of profit would be less than Rs. 30,000 p.a Profit for the period ended 31st March, 2019 was Rs. 1,20,000. Calculate deficiency to be charged to A.   [3]

14. State any three differences between Receipt Payment Account and Income and Expenditure Account.
                                                  OR   [3]

    Calculate the amount to be debited to income and expenditure account under the heading and also the Balance Sheet.
    During the year 2016-17 Entrance Fees receive Rs. 1,20,000 According to the policy of the club. 30% of the entrance fee is to be capitalised.

15. R and S were partners in a firm sharing profits in 3:2 ratio. Their respective fixed capitals were Rs. 10,00,000 and Rs. 15,00,000. The Partnership deed provided the following
    (i) Interest on capital @ 10% p.a.
    (ii) Interest on drawings @ 12% p.a
    During the year ended 31.03.2013
    R's drawings were Rs. 1,000 per month drawn at the end of every month and S's drawings were 2000 per month drawn in the beginning of every month. After the preparation of final accounts for the year ended 31.03.2013 it was discovered that interest on R's drawing was not taken into consideration. Calculate interest on R's drawing and give necessary adjusting entry for the same. [4]

16. Arun Barun and Chug are partners dealing in musical instrument sharing profits in 3:2:2 they admitted Mallika, the famous classical dancer into partnership for 1/5th share which share acquired from Arun, Barun and Chug in 2:2:1 ratio respectively. Your are required to calculate the new Profit sharing ratio.

OR

A and B contribute Rs. 20,00,000 and Rs. 12.00.000 respectively by way of capital on which they agree to allow interest at 6% p.a. their respective share of profits is 3:2 and the profits for the year is Rs. 1,60,000 Before allowing interest on capitals. Prepare the necessary account to allocate interest on capitals.
(i) When Partnership deed is silent in treating interest as a charge or appropriation and
(ii) When interest is to be allowed irrespective of profits. [4]

17. Sheetal Products Ltd. Registered with capital of Rs. 90,00,000 divided into 90,000 equity share of Rs. 100 each the company issue prospectus inviting applications for 50, 000 equity shares of Rs. 100 each payable as Rs. 20 on Application , Rs. 30 on allotment , Rs. 20 on First call and balance on Second Call.
    Applications were received for 45,000 shares Raman to home 16,00 shares were allotted failed to pay the final call money and these share were forfeited. Of the forfeited shares 6,00 share were reissued to Sukhman credited as fully paid Rs. 90 per share. Present the share capital as per schedule III of the companies Act 2013. [4]

18. A, B and C were partners sharing profits in the ratio of 4:3:2
    Their Balance Sheet as at 31t March 2014 was as follows : -

Liabilities	Amount	Assets	Amount
Capitals		Cash	10,000
A : 5,00,000		Bank	40,000
B : 3,00,000		Stock	2,00,000
C: 1,50,000	9,50,000	Debtors	4,00,000
Creditors	1,45,000	Land	5,00,000
Workmen Compensation Reserve.	40,000		
Provision for Doubtful Debts	15,000		
	11,50,000		11,50,000

B died on 12th June 2014 and it was agreed that A and C will share future profits in the ration of 5:4 the following was agreed upon:
(i) Goodwill is to be valued at 2.5 years purchase of average profit of last three years. The average profit were Rs. 1,80,000.
(ii) B's share of profit till the date of his death will be calculated on the basis of average profit of last three years.

(iii) Land was undervalued by Rs. 1,20,000 and stock overvalued by Rs. 43,000.

(iv) Provision for Doubtful Debts is to be made at 5% of Debtors.

(v) Claim of workmen compensation was estimated at Rs. 10,000

Prepared B's capital Account to be presented to his Executors. [4]

19. The following is the Receipt and Payment Account of Super Time Club for the year ended 31st Dec,2016

RECEIPTS AND PAYMENTS ACCOUNTS

Receipts	Rs.	Payments	Rs.
To Cash in hand	18,160	By Bank overdraft (1.1.2016)	14000
To subscriptions:		By Investments	2,00,000
2015 1,200		By Furniture	5960
2016 64800		By Salaries	20,400
2017 600	66,6000	By Printing and stationeries	24,160
	50,000	By Postage	44000
To Entrance Fees	3,20,000	By Cost of Drama	1,20,000
To Proceeds From Drama	2000	By Sundry Expenses	5600
To Interest from Securities	400		
To sales proceeds from old Furniture		By Balances :	
(Cost Rs. 320)		Cash in Hand	5640
		Cash at Bank	57000
	4,57,160		4,57,160

You are required to compile the Income and Expenditure Account for the year ended 31st December 2016 after taking into account for the following information :

(i) On 1st January , 2016 the club premises stood at Rs. 1,00,000 , Investment at Rs. 24,000 ,furniture Rs. 12,000 and stock and stationery Rs. 360.

(ii) The club had 720 members each paying and annual subscription of Rs. 100, subscription amounting to Rs. 200 were still in Arrears for the year 2015 .

(iii) Salaries for December 2016 amounting to Rs. 1600 are outstanding.

(iv) Entrance fee and surplus from Drama are to be kept in Reserve for a swimming's pool.

(v) Write off 50 % of Printing and stationary. [6]

20. On 01.04.2017 , X Ltd issued 40,000 , 8% Debenture of Rs. 100 each at a discount of 3% redeemable at a premium of 5%after three year. The amount was payable as follows :

On application Rs. 50 per debenture.

Balance on allotment.

X Ltd. has a balance of Rs. 1,50,000 in Securities Premium Reserve and 80,000 in General Reserve loss for the year was Rs. 50,000.

Pass the journal entries for the issue of Debentures and writing off the loss on issue of Debentures. [6]

OR

XYZ Ltd. Issued 1,00,000 9% Debentures of Rs. 50 each at a premium of 10% on 30th June, 2017 redeemable on 31st March 2019, the issue was fully subscribed the company decided to transfer amount to DRR on 31st March, 2018 and invest in Fixed Deposits earning interest @ 10% p.a. on 1st April , 2018 to meet the legal requirement. Tax was deducted at source (TDS) by bank @ 10%.

Pass the journal entries for issue and Redemption of Debentures along with interest on Investment.

21. X Ltd. issued 1,00,000 shares of Rs. 10 each at 30 % premium. Amount was payable as follows :

	Rs.
On application	3
On allotment	5
On first call	2
On second and final call	3

Applications were received for 90,000 share and all were accepted. All money was received except:

(i) Ashok holding 1,000 shares failed to pay allotment money and his shares were forfeited after first call.

(ii) Dev, holding 800 shares failed to pay First Call money and his shares were forfeited after first call.

(iii) Tarun holding 500 shares failed to pay First call and second call money and his shares were forfeited.

All the forfeited shares were reissued @ Rs. 12 per share as fully paid up.

Pass the necessary journal entries in the books of X Ltd. [8]

OR

Ganesh Ltd offered to the Public , 1,00,000 equally Shares of Rs. 10 each at a premium of Rs. per share payable as follows:

	Rs.
On Application	3
On Allotment	4 (including premium)
On First call	3
On Second and Final call	2

Applications were received for 1,60,000 shares . All applications were placed under four categories and allotment was made as follows:

Category A : To applicants of 40,000 shares   in full.
Category B: To applicants of 60,000 shares   40,000 shares
Category C: To applicants of 30,000 shares   20,000 shares
Category D: To applicants of 30,000 shares   Nil.

Expect in the case where applications were wholly rejected, excess application money was not 16 be refunded but to be adjusted against money due on allotment and calls.

Arun an applicant under category B who applied for Rs. 2400 shares failed to pay the allotment money and on his failure to pay the first call his shares were forfeited.

Bimal , an applicant under category C who applied for 1,200 share failed to pay both the calls and his shares were also forfeited after the second and final call.

All the forfeited shares were reissued to charan as fully paid for Rs. 8.50 per share. Show Cash Book and journal entries.

22. Lokesh , Mansoor, and Nihal were partners in a firm sharing profits as 50% , 30% and 20% respectively. On 31st March, 2014 their Balance sheet was as follows .

Liabilities	Rs.	Assets	Rs.
Creditors	34,000	Cash	68,000
Provident Fund	10,000	Stock	38,000
Investment Fluctuation Fund	20,000	Debtors 94000	
Capital A/c		Less: Provision 6000	88,000
Lokesh	1,40,000		80,000
Manohar	80,000	Investment	40,000
Nihal	50,000	Goodwill	20,000
		Profit and Loss	
	3,34,000		3,34,000

On the above date Mansoor retired and Lokesh and Nihal agreed to continue on the following terms

(a) Firm's goodwill was valued at Rs. 1,02,000 and it was decided to adjust Mansoor's share of Goodwill into the Capital A/c of the continuing partner.

(b) There was a claim for workmen's compensation to the extent of Rs. 12,000 and investment were brought down to Rs. 30,000.

(c) Provision for Bad debts to be reduced by Rs. 2,000

(d) Mansoor was to be paid Rs. 20600 in cash and the balance will be transferred to his Loan Account

Which was paid in two equal instalments together with interest @ 10% per annum.

(e) Lokesh's and Nihal's Capital were to be adjusted in their new profit sharing ratio by bringing in or paying off cash as the case may be

Prepare Revaluation Account and Partner's Capital Accounts.   [8]

OR

A and B decided to dissolve their firm on 31st July 2016. From the information given below complete the realisation A/c

Dr.   Bank Account

Particulars	Rs.	Particulars	Rs.
To Balance b/d	------	By Realisation A/c	-----
To Realisation A/c	------	By A's Capital A/c	-----
To B's Capital A/c	-------		
(Deficit brought in)			--------------------
	50,000		……..
	--------------------		--------------------

Realisation Account

Particulars	Rs.	Particulars	Rs.
To Sundry Assets: Stock A/c 14000 Debtors A/c -------- Fixed Asset 70,000	1,20,000 -----------	By Creditors A/c. By Bank A/c (Assets realise) Stock 10,000 Debtors 28,000	33,000 38,000
To Bank Creditors (paid)			
To A's Capital A/c (Realisation Exp)	2,0000	By B's Capital A/c (Fixed A/cs: Loss on Realisation A 2/3 ----- B 1/3 -------	30,000 --------
	----------- 1,52,000 ------------		-------------- --------- --------------

Capital Account

Particulars	A	B Rs.	Particulars	A	B Rs.
To Advertisement Suspense A/c	6,000	------ ------	By Balance b/d By Reserve	------ ------	40,000 4,000
To Realisation A/c	-------	------	By Realisation A/c (Exp)	-------	
To Reasliasation A/c (Loss)	-------	------			
To Bank	20,000	------			
	-------	------		------	-------

PART B

Financial Statement Analysis

23. Credit Revenue from operations Rs. 9,00,000. Trade receivable Turnover ratio 6 times closing trade Receivables were 1.5 times than that in beginning closing trade receivables will be: [1]
    (a) Rs. 1,20,000   (b) Rs. 60,000   (c) Rs. 1,80,000   (d) Rs. 90,000

24. State whether the following statement is True or False: [1]
    If Debt Equity ratio is 1.6:1 , then issue of new shares against purchase of Machinery will increase he ratio.

25. A company sold inventory costing Rs. 2,00,000 at a loss of Rs. 10,000. It will result in inflow, outflow or no flow of cash? [1]

26. "Capital gain tax paid on sale of building by a company" will be shown under which type of activity while preparing the cash flow statement? [1]

27. What is "Operating Cycle"? [1]

28. A firm has a current ratio of 3:5:1 and quick ratio of 2:1 . Assuming inventory at Rs. 30,000 what will the amount of Current Assets? [1]

29. Match the following: [1]
1. Debt Equity ratio   3:1   (a) Risky
2. Current ratio is   3:1   (b) Ideal
3. Quick ratio   0.8:1   (c) Safe
                                 (d) None of the above

30. Opening Inventory Rs. 1,20,000 [3]
Closing Inventory 1.5 times of the Opening inventory.
Inventory Turnover Ratio 6 times.
Selling Price $33\frac{1}{3}$ % above cost. Calculate the Gross Profit ratio.

OR

Under which (Main heads) Line items of the statement of Profit and Loss of a Financial Company Nill the following be shown: [3]
(i) Goodwill written off
(ii) Dividend Received
(iii) Revenue from Services rendered
(iv) Profit on Sale of Fixed Assets
(v) Leave Encashment Exp
(vi) Courier Expenses.

31. Following is the Comparative Balance Sheet of Kalam Fabrics Ltd. as on 31st March 2016 and 2015 prepare the Comparative Balance Sheet . [4]

Particular	Note No.	31.03.2016 Rs.	31.03.2015 Rs.
I. Equity And Liabilities			
1. Shareholder's Funds:			
(a) Share Capital		10,00,000	5,00,000
(b) Reserves and Surplus		2,00,000	3,00,000
2. Non-Current Liabilities			
Long term Borrowings:			
3. Current Liabilities		8,00,000	5,00,000
Trade Payables		4,00,000	2,00,000
II. Assets Total		24,00,000	15,00,000
1. Non – current Asset			
(a) Fixed Assets			
(i) Tangible Asset		14,00,000	8,00,000
(ii) Intangible Asset		3,00,000	2,00,000
2. Current Assets			
(a) Inventories			
(b) Cash and Cash Equivalents		5,00,000	4,00,000
		2,00,000	1,00,000
Total		24,00,000	15,00,000

OR

Fill in the Blanks

Common Size Statement of Profit and Loss
For the year ended 31st March 2017 and 2018

Particular	Note No.	Absolute Amount		Percentage of Revenue from operations.	
		2016-17	2017-18	2016-17	2017-18
I. Revenue from Operation		40,00,000	60,00,000	% ----	% 100
II. Other Income		----------	1,50,000	1.5	----
III. Total Revenue (I-II)		40,60,000 -----------	------------- 61,50,000	----------- -------- -----------	-------- ------ --------
IV. Less Expenses		(30,40,000) (...........)	43,20,000 1,20,000	----------- (2)	-------- ----
Purchase of stock in Trade		-----	------	5	6
Change in Inventories		------------ 31,60,000 -------------	--------------- 48,00,000 --------------	---------------	
Other Expenses		------	-------	------------- -------	-------- ------
Total Expenses					
Profit before Tax					

32. From the following information , Calculate Cash Flow operating activates. [6]

Particular	31st March 2015 Rs.	31st March 2014 Rs.
Surplus (statement of Profit and Loss)	71,000	89,000
Inventory	12,000	4,000
Trade Receivables	58,000	45000
Outstanding Expenses	14,600	10000
Goodwill	57,000	27000
Cash in Hand	9,000	12,000
Machinery	82,000	56,000

(i) A piece of Machinery costing Rs. 50,000 on which depreciation of Rs. 20,000 had been charged was sold Rs. 10,000. Depreciation charged during the year was Rs. 18000.

(ii) Income Tax Rs. 23000 was paid during the year

(iii) Dividend paid during the year was Rs. 36000. [6]

Class:-XII   **Subject:- History**

Time- 3 Hrs.   **M.M.-80**

> **General Instructions:**
> • *Answer all the questions. Some questions have internal choice. Marks are indicated against each question.*
> • *Question number 1to 20 (Part-A) are objective type questions carrying 1 mark should be one word or one sentence each.*
> • *Answer to questions carrying 3 marks (Part-B Question 21 to 24) should not exceed 100 words each.* • *Answer to questions carrying 8 marks (Part-C Question 25 to 27) should not exceed 350 words each.* • *Question numbers 28 to 30 (Part -D) are Source based questions carrying 6 marks each.*
> • *Question number 31 (Part-E) is a Map question that includes identification and location of significant test items. Attach the map with the answer book.*

PART-A

1. Consider the following statement regarding identification of agricultural technologies in Harappan culture.

   1. Grains were found from several sites

   2. A ploughed field was found in Kalibangan

   3. Bulls and ox were found in Harappa seals

   4. Models of plough have been found at different sites

   Which of the above gives us exact evidences of Harappan agricultural techniques?

   a. 1 and 2
   b. 2 and 3
   c. 1 and 4
   d. 2 and 4   [1]

2. Who was the first Director-General of ASI?   [1]

3. Name the three languages in which Jain literature was produced   [1]

4. Differentiate between *Nazr* and *peshkash*   [1]

5. Choose the correct option

   The land grant done by Vakataka queen Prabhavati Gupta is considered an exceptional act because

   A. She was considered a very cruel lady
   B. The land and resources were generally controlled by men
   C. Arthashastra bans women from donating anything to anyone
   D. There are no evidence of any such land grant   [1]

6. The bazaar of Chandni Chowk, the throbbing centre of Shahjahanabad, was designed by _____ [1]

7. Choose the correct option:

    The numerical designations of zat was an indicator of position in the imperial hierarchy and the salary of the official under which system?

    A.Sawar

    B.Murid

    C.Amir

    D.Mansabs   [1]

8. Choose the correct option:

    The sixteenth century Portuguese traveler who gave us description about the houses of ordinary people of the Vijaya Nagara Empire

    a. Nicolo de Conti

    b. Vasco da Gama

    c. Duarte Barbosa

    d. Domingo Paes   [1]

9. Identify which of the following aspects is NOT common to both Bhakti movement and Sufi Movement?

    A. Personal love to God

    B. Worship of idols

    C. Mysticism

    D. Visit to Holy shrines   [1]

10. Whose shrine is known as Gharib Nawaz?   [1]

11. With which of the following responsibility was Mr. S.N. Mukharjee was given in the Indian constituent assembly?

    A. To guide the Draft committee

    B. To put complex proposals in clear legal language

    C. To prepare a series background papers

    D. To steer the discussion along constructive lines   [1]

12. Find out from the following which one is NOT correctly matched

    A. Rihla   : Arabic

    B. Kitab-ul-Hind   :Arabic

    C.Babur Nama   :Arabic

    D.Akbar Nama   :Persian   [1]

13. Mention the reason why Asaf khan returned a ring presented to him by Thomas Roe 1

14. Give the meaning of the term "Hindu Suratrana".   [1]

15. Cite one reason why Gandhiji considered Charkha as a symbol of an ideal human society   [1]

16.   Consider the following events

        1. Cabinet Mission

        2. Cripps mission

        3. Khilafat movement

        4. Pakistan Resolution

    The correct chronological order of these events is:

    a. 4,3,2,1
    b. 4,3,1,2
    c. 3,4,1,2
    d. 3,4,2,1   [1]

17.   Indicate which of the following is NOT correct.

    People gave evasive answers to the census officials as

    A. They were suspicious of census operations

    B. They thought that enquiries were being conducted to impose new taxes.

    C. They were not willing to give any information regarding the women of their household

    D. They were claiming identities associated with lower status   [1]

18.   Consider the following statement regarding the city planning in colonial India

    I. The British felt that European styles of architecture would best symbolize their

        superiority

    II. Importation of colonial styles expressed the British desire to create a familiar

        landscape in an alien country.

    III . Indian Houses attracted British Authorities

    Which of the above statement(s) is/are correct?   [1]

    a. Only I

    b. I and II

    c. I and III

    d. I,II, and III

19.   Assertion (A) : Agricultural tracts were incorporated within the fortified area of Vijayanagara

                Empire.

    Reason (R): The medieval sieges was to starve the defenders into submission.

    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   [1]

20.   Identify the following image and write its name.1

<div align="center">**PART-B**</div>

21.   State any three unique elements of the urban planning of the Harappan civilization keeping view of
        the town planning in Mohenjodaro.   [3]

22.   "Epigraphy alone does not provide a full understanding of political and economic history.' Justify
         the statement

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

         "Epigraphy needs to be juxtaposed with other evidences of history "Justify with suitable arguments. [3]

23.   Show how the official reports helped historians reconstruct history by taking the example of the Deccan
        Riots Commission .   [3]

24.   Explain how rumours and prophecies played a part in moving people to action during the 1857
        revolt.   [3]

<div align="center">**PART-C**</div>

25. "The opponents feel perhaps justify that this propaganda for Hindi cuts the very root of the
     provincial languages ."Evaluate the statement in the context of the decision making process of the
     constituent assembly about a common language for the nation.   [8]

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

     "poison that has entered the body politic of our country ". Justify the statement in the context of the
     demand in the constituent assembly for separate electorates .

26.   Describe the condition of an average peasant of North India during the seventeenth century   [8]

27.   Buddha's teachings have been reconstructed from stories. Explain the teachings   with the   incidents
        changed the life of the Buddha.   [8]

<div align="center">**PART –D**</div>

28.   Read the following extracts carefully and answer the following questions

         On clearance and settled cultivation

         Passing through one village in the lower Rajmahal hills, Buchanan wrote: The view of the country is
         exceedingly fine, the cultivation, especially the narrow valleys of rice winding in all directions, the
         cleared lands with scattered trees, and the rocky hills are in perfection; all that is wanted is some
         appearance of progress in the area and a vastly extended and improved cultivation, of which the
         country is highly susceptible. Plantations of Asan and Palas, for Tessar (Tassar silk worms) and Lac,
         should occupy the place of woods to as great an extent as the demand will admit; the remainder might
         be all cleared, and the greater part cultivated, while what is not fit for the purpose, might rear Plamira
         (palmyra) and Mowa (mahua)

i. Mention about Buchanan's opinion of how the land of Rajmahal more productive. 2

ii. How were Buchanan's vision and priorities on development different from the local inhabitants? 2

iii. Explain how the inhabitants of the Rajmahal hill felt about the Buchanan's ideas of production. 2

29. Read the following extract carefully and answer the questions that follow

Producing "fine sons"

Here is an excerpt of a mantra from the Rig veda , which was probably inserted in the text c.1000 BCE, to be chanted by the priest while conducting the marriage ritual . It is used in many Hindu weddings even today:

I free her from here, but not from there. I have bound her firmly there,

So that through the grace of Indra she will have fine sons

and be fortunate in her husband's love.

Indra was one of the principal deities ,a God of valour, warfare and rain."Here" and "there" refer to the father's and husband's house respectively.

1. Who was Indra?   [2]
2. Why did people wanted to be blessed by Indra?   [2]
3. Mention the Rigveda Mantra given in the passage .How is it used in today's Hindu society? [2]

30. Read the following extract carefully and answer the questions that follow

A Warning for Europe

Bernier warned that if European kings followed the Mughal model:

Their kingdoms would very far from being well cultivated and peopled, so well built, so rich, so polite and flourishing as we see them. Our kings are otherwise rich and powerful: and we must avow that they are much better and more royally served .They would soon be kings of deserts and solitudes ,of beggars and barbarians, such as those are whom I have been representing (the Mughals)

…We should find the great cities and the freat Burroughs(boroughs)rendered uninhabitable because of ill air,and to fall to ruine (ruin)without anybodies (any body) taking care of repairing them: the hillocks abandoned and the fields overspread with bushes, or fill'd with pestilential marishes (marshes) ,as hath already intimated.

1.In what way Bernier condemn the mughal rulers?   [2]

2. Compare and contrast the description of Bernier and Abul Fas'l about the Mughal empire?

                                                                                   [2+2=4]

PART-E

31.1   On the given political outline map of India ,locate and label the following with appropriate

Symbols.   [6]

a) Rakhigarhi, a Mature Harappa site

b) Kalibangan , a Mature Harappa site

c) Agra the imperial capital of Mughals 1587

31.2.   On the same map three places marked as A,B and C related to the Indian National Movement and write their correct name on the lines drawn near them.

POLITICAL MAP OF INDIA
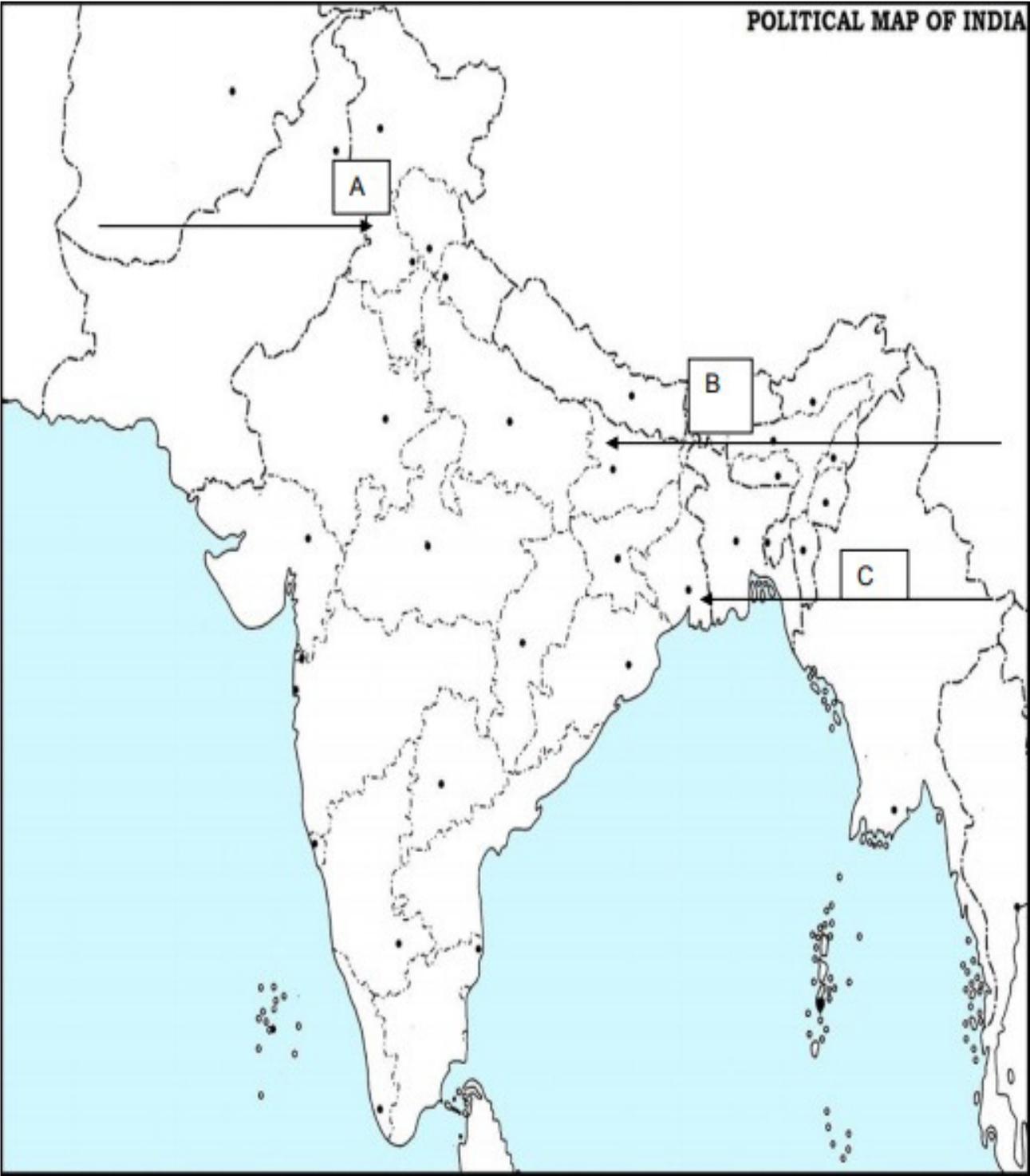
A

B

C

DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:- Physical Education**

Time- 3 Hrs.   **M.M.-70**

General Instruction:-

1.   The question paper consists of 34 questions.

2.   Answer to question carrying 3 marks should be in approximately 80-100 words.

3.   Answer to questions carrying 5 marks should be in approximately 150-200 words.

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1.   Which type of exercise was developed by Perrine?   [1]

2.   Who said "The drive to strive is called motivation"?   [1]

3.   Sliding friction and rolling friction are the types of …………… friction.   [1]

4.   In which type of fracture a broken bone damages the internal organs?   [1]

5.   In which year the Harvard Step Test was developed?   [1]

6.   Vinesh Phogat, Babita Kumari and Sakshi Malik are related to which sports?   [1]

7.   Which disorder causes repeated unwanted thoughts?   [1]

8.   Type I and type II are the two types of …………… .   [1]

9.   Which vitamin was discovered by Elemer Mc column?   [1]

10. What is the name of the committee that announces the dates and venue of tournament?   [1]

                                              OR

     ……………. means the activities which are performed within the campus of an institution.

11. Who designed circuit training method?   [1]

12. What is that motivation which occurs when external factors compel the person to do something? [1]

                                              OR

     ------------- is the ability of muscles to overcome resistance.

13. What is special seeding?   [1]

14. What do you mean by micro nutrients?   [1]

                                              OR

     What is bulimia nervosa?

15. Write any two draw backs of round robin tournament.   [1]

16. What is the role of friction in movement of body?   [1]

17.   Define extrinsic motivation .   [1]

18.   Give one reason that why intramural activities are necessary.   [1]

19.   What is the purpose of Back Scratch Test?   [1]

OR

Suggest one precaution to avoid Bow legs?

20.   What are the three items that form the Barrow General Motor Fitness Test?   [1]

21.   Differentiate between the three kinds of strain.   [3]

22.   Explain the significance of Intramurals.   [3]

23.   Describe three objectives of planning in sports.   [3]

OR

Describe the types of aggression in sports.

24.   State the effects of exercise on the cardio-vascular system.   [3]

25.   How are unsuitable furniture and carrying extra weight responsible for developing bad posture
       in a child? Discuss with suitable examples.   [3]

OR

Explain the term 'acceleration run' and 'pace run'.

26.   What is meant by 'motivations'? Explain the different techniques of motivation to achieve high
       goals in sports?   [3]

27.   What is Endurance? Explain its types.   [3]

28.   Elucidate the Big five personality theory.   [3]

29.   Discuss the various movements which fall under angular movement.   [3]

OR

Explain any three causes of ASD.

30.   Explain the procedure of Parvatasana.   [3]

31.   Mention any five disability etiquettes.   [5]

OR

Suggest corrective measures for flat foot and lordosis.

32.   Describe the procedure of Chair sit and Reach test and six minute walk test.   [5]

33.   Explain the physiology factors determining endurance.   [5]

34.   What do you mean by coordinative abilities? Mention any for types of coordinative abilities.

OR   [5]

Explain the strategies for Enhancing Adherence to Exercise.

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:- Mathematics**

Time- 3 Hrs.   **M.M.-80**

General Instructions :

- Answer all questions.
- Put the question number against each answer.
- Question paper is comprised of four sections A, B, C and D.
- Section- A carries 20 questions of Very short answer type for one mark each. Section-B carries 6 questions of short answer type for two marks each. Section-C carries 6 questions of four marks of long answer type for four marks each. Section-D carries 4 questions of very long answer type for six marks each.
- Internal choices are given for two questions of section-A , two questions of section-B, two questions of section-C and one question of Section-D.
- Use of calculator is not permitted.
- If you wish to answer any question again then you cancel the answer given earlier, which is to be changed.

Section-A

1) If $f : R \to R$ be defined by $f(x) = (3 - x^3)^{1/3}$ then which one is the right choice for $fof(x)$?

   a) x^3 b) x c) 1 d) $none$.

2) Which option is the true range of the function $f(x) = \sec^{-1} x$.

   a) $(0, \pi)$ b) $[0, \pi] - \{\frac{\pi}{2}\}$ c) $[-\frac{\pi}{2}, \frac{\pi}{2}] - \{0\}$ d) $none$.

3) If $[2x \quad 3] \begin{bmatrix} 1 & 2 \\ -3 & 0 \end{bmatrix} \begin{bmatrix} x \\ 3 \end{bmatrix} = 0$. Find x.

   a) $only\ 0$ b) $only\ \frac{3}{2}$ c) $0\ and\ \frac{3}{2}$ d) $none$.

4) $\begin{vmatrix} 43 & 3 & 6 \\ 35 & 21 & 4 \\ 17 & 9 & 2 \end{vmatrix} = ?$

   a) 0 b) 78 c) 1 d) $none$.

5) The radius of a spherical balloon is increasing at the rate of 2 cm/s when it is inflated. Select the rate at radius 1.5 cm with which its surface area is increasing.

   a) $\pi\ cm^2/s$ b) $24 cm^2/s$ c) $24\pi cm^2/s$ d) $none$.

6) Select the correct option for area of the triangular region whose sides have the equations $y = 2x + 1, y = 3x + 1\ and\ x = 4$.

   a) $8\ sq. unit$ b) $16\ sq. unit$ c) $2\ sq. unit$ d) $none$.

7) What is the count of arbitrary constant for the curve $y = A + \ln Bx$.
   a) 0   b) 2   c) 1   d) none .

8) Which choice is the correct Integrating factor for ordinary differential equation $\frac{dy}{dx} + \frac{y}{1+x^2} = x$.
   a) $\tan^{-1} x$ b) $e^{\tan^{-1} x}$ c) $(1+x^2)$ d) none .

9) What is the area of a parallelogram whose diagonals are given as
   $\vec{a} = 3\,\hat{\imath} + \hat{\jmath} - 2\hat{k}, \vec{b} = \hat{\imath} - 3\hat{\jmath} + 4\hat{k}$.
   a) $3\sqrt{10}$ sq. unit   b) 8 sq. unit   c) $5\sqrt{3}$ sq. unit   d) none .

10) An instructor has a question bank consisting of 300 easy True /False questions,200 difficult True /False questions ,500 easy MCQ and 400 difficult MCQ's. If a question is selected at random from the question bank, what is the probability that it will be an easy question ,given that it is an MCQ.
   a) $\frac{5}{9}$ b) $\frac{5}{14}$ c) $\frac{3}{14}$ d) none

11) If $y = \tan^{-1}\left[\frac{\sqrt{a}-\sqrt{x}}{1+\sqrt{ax}}\right]$ then $\frac{dy}{dx} = - - - - - ?$.

12) Slope of the tangent to the curve $x^3 + x^2 y - 2y^3 = 10$ at (2,1) is -------- ?

13) $\int \tan^4 x\, dx$ = ---------------------- ?

14) $\int e^x (tanx + 1) secx\, dx = - - - - - - - - ?$

15) Cartesian equation of the line which passes through the point (1,2,3) and parallel to the line
   $\frac{-x+1}{1} = \frac{y+3}{7} = \frac{2z-6}{7}$ is --------------------------------------- ?

16) A relation R is defined on a set $A = \{1,2,3\}$ as follows $R = \{(1,1), (2,2), (3,3)\}$ .Is it transitive?

17) $\sin x + \cos x$ **is** continuous function. Why? Give justification.
   OR,
   Supply a function which is continuous but not differentiable at two distinct points.

18) Show that $f(x) = 3x + \sin x$ is strictly increasing function for all x.

19) Evaluate $\int_2^8 |x - 5| dx$ OR, $\int_0^{\frac{\pi}{2}} \sin^2 x\, dx$.

20) A manufacturer produces nuts and bolts. It takes 1 hour of work on machine A and 3 hours on machine B to produce a package of nuts. It takes 3 hours on machine A and 1 hour on machine B to produce package of bolts. He earns a profit of Rs17.50 per package on nuts and Rs7.00 per package on bolts. Formulate an LPP to maximize his profit, if he operates his machine for at the most 12 hours a day?

Section-B

21) If $0 < x < 1$, then solve the following for x,
   $\tan^{-1}(x + 1) + \tan^{-1}(x - 1) = \tan^{-1}\frac{8}{31}$.

22) Express the matrix A = $\begin{bmatrix} 1 & 3 & 5 \\ -6 & 8 & 3 \\ -4 & 6 & 5 \end{bmatrix}$ as the sum of a symmetric and a skew symmetric matrix.

   OR,

   Using elementary transformation find inverse of the matrix $\begin{bmatrix} 1 & 3 \\ 2 & 5 \end{bmatrix}$.

23) Using properties of determinant, prove that

$$\begin{vmatrix} a-b-c & 2a & 2a \\ 2b & b-c-a & 2b \\ 2c & 2c & c-a-b \end{vmatrix} = (a+b+c)^3$$

24) Using differentiation evaluate the approximate value of $\sqrt{27}$

OR

Using Lagrange's Mean Value theorem determine a point on the curve $y = \sqrt{x-2}$ defined in the interval [2,3] where the tangent is parallel to the chord joining the end points on the curve.

25) If $\vec{a}$, $\vec{b}$, $\vec{c}$ are unit vectors such that $\vec{a} + \vec{b} + \vec{c} = 0$, then find the value of $\vec{a}.\vec{b} + \vec{b}.\vec{c} + \vec{c}.\vec{a}$.

26) How many times must a man toss a fair coin so that the probability of having at least one head is more than 90 %.

Section –C

27) Consider $f: R_+ \to [-5, \infty)$ given by $f(x) = 9x^2 + 6x - 5$. Show that f is invertible with $f^{-1}(y) = \frac{\sqrt{y+6}-1}{3}$.

28) If $y = x^{\cos x} + (\sin x)^{\tan x}$, *then find* $\frac{dy}{dx}$.

OR,

If $y = Ae^{kx} \cos(px + c)$, *then show that* $\frac{d^2y}{dx^2} - 2k\frac{dy}{dx} + (p^2 + k^2)y = 0$

29) Using properties, evaluate $\int_0^{\frac{\pi}{4}} \log(1 + \tan x)dx$,

30) Solve the differential equation $\left\{ x \cos\left(\frac{y}{x}\right) + y \sin\left(\frac{y}{x}\right) \right\} y dx = \left\{ y \sin\left(\frac{y}{x}\right) - x\cos\left(\frac{y}{x}\right) \right\} x dy$

31) A dietician has to develop a special diet using two foods P and Q .Each packet (containing 30 gm) of food P contains 12 units of calcium, 4 units of iron ,6 units of cholesterol and 6 units of vitamin A. Each packet of same quantity of food Q contains3 units of calcium, 20 units of iron ,4 units of cholesterol and 3 units of vitamin A. The diet requires at least 240 units of calcium at least 460 units of iron and at most 300 units of cholesterol. How many packets of P and Q food should be used to minimise the vitamin A in the diet .What is the minimum amount of vitamin A .

32) Two numbers are selected at random (without replacement) from first seven natural numbers. If X denotes the smaller of the two numbers obtained, find the probability distribution of X. Also find mean of the distribution.

OR

There are three coins, one is a two headed coin (having head on both the faces), another is a biased coin that comes up head 75% of the time and the third is an unbiased coin. One of the three coins is chosen at random and tossed. If it shows head, what is probability that it was the two headed coin?

Section-D

33) Using the properties of determinants prove that

$$\begin{vmatrix} (y+z)^2 & xy & xz \\ xy & (x+z)^2 & yz \\ xz & yz & (x+y)^2 \end{vmatrix} = 2xyz(x+y+z)^3$$

OR,

If $A = \begin{bmatrix} 2 & 3 & 4 \\ 1 & -1 & 0 \\ 0 & 1 & 2 \end{bmatrix}, find\ A^{-1}$. Hence solve the system of equations $x - y = 3, y + 2z = 7$ and $2x + 3y + 4z = 17$.

34) A given quantity of metal is to be casted into a solid half circular cylinder with a rectangular base and semi circular ends. Show that in order that total surface area is minimum, the ratio of length of cylinder to the diameter of the semi circular ends is $\pi : \pi + 2$.

OR,

Show that the triangle of maximum area that can be inscribed in a given circle is an equilateral triangle

35) Find the area of the circle $4x^2 + 4y^2 = 9$ which is interior of the parabola $x^2 = 4y$.

36) Find the equation of a plane passing through the points $A(2,1,2)\ and\ B(4,-2,1)$ and perpendicular to plane $\vec{r}.(\hat{\imath} - 2\hat{k}) = 5$. Also find the co ordinates of the point, where the line passing through the points $(3,4,1)$ and $(5,1,6)$ crosses the plane thus obtained.

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Class:-XII   **Subject:- Sociology**
Time- 3 Hrs.   **M.M.-80**

General Instructions:-

1. The question paper is divided into four sections.
2. There are 38 questions in all. All questions are compulsory.
3. Section A includes question No: 1-20. These are objective type questions. There can be either one or two answers only.
4. Section B includes question No: 21-29. 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. 30-35. They are short- answer type questions carrying 4 marks each. Answer to each question should not exceed 80 words.
6. Section D includes question No. 36-38. They are long- answer type questions carrying 6 marks each. Answer to each question should not exceed 200 words each.
7. Question No; 38 is to be answered with the help of passage given.

SECTION-A

1. According to Robert Malthus Population rises in---------progression whereas agriculture production grows in ---------progression.
2. Correct the given incorrect statement.
   Decline in the sex ratio includes severe neglect of boys babies in infancy.
3. This refers to the estimated number of years that an average person is expected to survive.
   a. Fertility rate
   b. Mortality rate
   c. Life expectancy
   d. age structure
4. -----------is the average number of children that would be born alive to a women during her child bearing age.
5. The hierarchical ordering of castes is based on the distinction between purity and ------.
6. Which of the following is not the feature of tribal society----
   a. Aminist
   b. Egalitarian
   c. Hierarchy
   d. kinship based
7. Among the first to point out that the goods that people buy and use are closely related to their status in society. Identify the sociologist.
   a. Alfred Gell
   b. Max Weber
   c. Emile Durkheim
   d. M N Sriniwas

8. ---------used the idea of the' invisible hand' which stimulates the economy and creates more wealth.
9. Correct the statement.

   " Privileged minorities such as the extremely wealthy people are usually referred to as minorities."
10. **True or False**.

    If prejudice describes attitude and options, discrimination refers to actual behavior towards another group or individual.
11. De-urbanisation saw the decline of cities such as Surat and Masulipatnam while -----and ----grew.
12. In 1960, an English merchant named Job Charnock arranged to lease three villages by the river Hoogly in order to set-up a trading post named-----------.
13. ------------, The leading journal for women in Punjab came out in favour of resolution condemning polygamy.
14. A process whereby people want to improve their status through adoption of names and customs of culturally high placed groups ---
    a. sanskritisation
    b. westernization
    c. modernization
    d. secularization.
15. Industrialists form associations such as------and -------.
16. Schemes like the integrated Rural Programme and Integrated Child Development Schemes are monitored by---------.
17. These laws imposed an upper limit on the amount of land that can be owned by a particular family.
    a. Tenancy abolition and Regulation Act.
    b. Abolition of Zamindari system.
    c. Benami transfer Act.
    d. Land Ceiling Act.
18. When agriculturists produce primarily for themselves and are unable to produce for the market, is known as ---------------agriculture.
19. In India's mixed economy policy some sectors were reserved for ------while others were open to the-----.
20. To increase output by organizing work , an American Fredrick Winston invented a new system known as ------------.

SECTION-B

21. What is 'Formal Demography'?

    OR

    Explain 'Pandemic'.
22. What is BPO ?
23. Explain the term 'Jajmani system'.
24. What is community identity?

    OR

    What does the principle of nationalism assume?
25. What is 'Assimilation'.
26. State the main concerns of 19th century social reformers.
27. What is culture?
28. What role does pressure group play in Indian democracy?

29. Describe the view of Dr. B R Ambedkar for constituting Panchayati Raj?

      OR

   What is 'Participatory democracy'?

SECTION-C

30. Caste is an all encompassing system .Discuss.

      OR

  Explain the concept of Dominant caste in India.

31. In what sense can one say that 'disability' is as much a social as a physical thing?

32. Why is it difficult to define the nation? How are nation and state related in modern society?

       OR

  In your opinion, has the linguistic reorganization of states helped or harmed India?

33. Discuss the role of the cities in the development of economy in colonial rule.

34. Discuss Green revolution in India and its social consequences.

35. How has Liberalisation affected employment patterns in India?

SECTION-D

36. While the globalization process is a complex and multidimensional phenomenon , some of its most visible and influential aspects are economic and cultural in nature. Elaborate.

37. Illustrate theories of social Movement.

    OR

   Describe the history of peasant movement.

38. Read the given paragraph and answer following questions.

        A study of 'HUM LOG's audience showed that high degree of parasocial interaction occurred between the audience members and their favourite Hum Log characters. For example , many Hum Log viewers reported that they routinely adjusted their daily schedules to 'meet' their favourite character ' in the privacy of their living rooms'. Many other individuals reported talking to their favourite characters through the television sets; for instance, "Don't worry , Badki. Do not give up your dream of making a career."

   HUM LOG achieved audience ratings of 65 to 90 per cent in North India. About 50 millions individuals watched the average broadcast of Hum Log. One unusual aspect of this soap opera was the huge number of letters, over 400,000 that it attracted from viewers; so manythat most of them could not be opened by Doordarshan officials.

  a. In what ways do viewers express their interest in T.V. programmes today?   [2 marks]

  b. Discuss the ways in which a mass medium like television can act as a powerful agent influencing public opinion in both positive and negative ways.   [4 marks]

DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:-Engineering Graphics**
Time- 3 Hrs.   **M.M.-70**

General instruction :-

Attempt all the questions. Use both sides of the drawing sheet, if necessary. All dimensions are in millimeters. Missing and mismatching dimensions, if any may be suitably assumed. Follow the SP: 46-2003 revised codes (with first angle method of projection). In no view of questions 2 , hidden edges or lines are required. In question 4 , hidden edge or lines are to be shown in views without section.

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1. Answer the following multiple choice questions. Print the correct choice on your drawing sheet.

    (i) The truncated lower portion of a Pyramid is called   [1x5=5]

    (a) Prism   (b) Frustum   (c) Cube   (d) Cone

    (ii) In a single riveted Lap Joint, the plates to be joined are

    (a) In contact with each other at the ends   (b) Overlapping each other

    (c) Inclined to each other   (d) Kept at a distance of 10 mm from each other.

    (iii) Which special type of sunk key looks like a segment of a circular disc?

    (a) Woodruff key   (b) Feather key   (c) Sunk key   (d) Flange

    (iv) Which of the following is not a part of an unprotected flange coupling?

    (a) Gasket   (b) Shaft   (c) Sunk key   (d) Flange

    (v) Gib head, rectangular and woodruff are types of :

    (a) gear   (b) keys   (c) bearings   (d) cotter joints

2. (i) Construct an isometric scale.   [4]

    (ii) A frustum of cone of top side diameter 30 mm, bottom side diameter 40 mm, height of the

    axis 60 mm, is resting on the ground of it's base. Axis perpendicular to the H.P. Draw the

    Isometric Projections. Give all the dimensions. Show the direction from viewing.   [7]

    (iii) A Vertical Pentagonal Prism of base edge 25 mm, height 70 mm, is placed centrally on the top circular face of a hemisphere of diameter 80 mm. one of the base edge of the prism is perpendicular to V.P. The common axis is perpendicular of H.P. Draw the Isometric Projection of the combination of solids. Show the common axis and indicate the direction of viewing. Give all the dimensions.   [13]

3.   (i) Draw to scale 1:1, the standard profile of a Knuckle Thread, taking enlarged pitch 40 mm. Give

standard dimensions.   [8]

OR

Draw to scale 1:1 , Front view and side view of a T-headed bolt of diameter 20 mm, keeping the axis vertical. Give standard dimensions.

(ii) Keep the axis vertical , sketch freehand the front view and top view of a Pan Head Rivet of diameter. 25 mm. Give the standard dimensions.   [5]

OR

Sketch freehand the front view, top view and side view of a woodruff key, for a shaft diameter 40 mm. Give the standard dimensions.

4.   In Fig – I show the details of the parts of a Turnbuckle. Assemble these parts correctly and draw the following views using scale 1:1, inserting 56 mm threaded portion of each rod inside the body.

(i) Front view, upper half in section.   [14]

(ii) Side view from left.   [8]

Print the title and the scale used. Draw the projection symbol. Give six important dimensions.   [6]

OR

Fig- 2 , show the assembly of an unprotected flange coupling. Disassemble the parts correctly and then draw to scale 1:1 its following views of the components. Keep the same position of both Flange –B and square headed bolt with respect to H.P. and V.P.

(i) Flange – B:

(a) Front view upper half in section.   [8]

(b) Side view from right   [8]

(ii) Square headed bolt:

(a) Front view

(b) Left side view

Print the title of both and the scale used. Draw the projection symbol. Give six important

dimensions.   [6]

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DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
PRE- BOARD-II EXAMINATION (2019-20)

Class:-XII   **Subject:-Biology**
Time- 3 Hrs.   **M.M.-70**

GENERAL INSTRUCTIONS:-

1. There are a total of 27 questions and five sections in the question paper. All questions are compulsory.
2. Section A contains question numbers 1 to 5, multiple choice questions of one mark each. Section B contains question numbers 6 to 12, short answer type I questions of two marks each. Section C contains question numbers 13 to 21, short answer type II questions of three marks each. Section D contains question number 22 to 24, case-based short answer type questions of three marks each. Section E contains question numbers 25 to 27, long answer type questions of five marks each.
3. There is no overall choice in the question paper. However, internal choices are provided in two questions of one mark, one question of two marks, two questions of three marks and all three questions of five marks. An examinee is to attempt any one of the questions out of the two given in the question paper with the same question number.
4. Wherever necessary draw a well labeled diagram.

SECTION-A

1. An antibiotic resistance gene in a vector usually helps in the selection of
   a. recombinant cell   b. competent cell   c. transformed cell   d. None of these
2. Which one of the following is not an intrauterine device?
    a. Femidom   b. Cu-T   c. Progestasert   d. Lippes loop
                                    OR
   Which of the following hormones are not produced by placenta?
   a. hcG   b. hpL   c. estrogens   d. relaxin
3. The historic convention on Biological Diversity held in Rio de Janeiro in 1992 is known as

a. CITES convention b. The Earth summit   c. G-16 summit   d. MAB programme
4.   In agarose gel electrophoresis, DNA molecules are separated on the basis of their
        a. charge only b. size only   c. charge to size ratio   b. All of the above
5.   HIV is a retrovirus as its genetic information is contained in
        a. DNA   b. DNA instead of RNA   c. RNA instead of DNA   d. Protein

OR

Which part of poppy plant is used to obtain the drug "Smack"?
a. Flowers   b. Roots   c. Leaves   d. Latex

SECTION-B

6.   A single pea plant in your kitchen garden produces pods with viable seeds, but the individual
        papaya plant does not. Why?

OR

a.   State the chromosome number in the meiocyte and gamete of an fruit fly.
b.   Why a liverwort plant is unable to complete its life cycle in a dry environment?
7.   What is primary productivity? Why does it vary in different types of ecosystems?
8.   Why did T.H.Morgan select *Drosophila* to study sex-linked genes for his lab experiments?

9.   Why do the toxic insecticidal proteins secreted by *Bacillus thuringiensis* kill the insect and not
        the bacteria itself?
10.   What is amniocentesis? How is it misused?
11.   "Growing of *Spirulina* on a large scale is beneficial both environmentally and nutritionally
        for humans." Justify.
12.   List the two methodologies which were involved in human genome project. Mention how
        they were used.

SECTION-C

13.   Explain the process of pollination in *Vallisneria*. How is it different in water lily, which is
         also an aquatic plant?
14.   Explain 'river popper' hypothesis. Name the ecologist who proposed it.

OR

a.   India has greater ecosystem diversity than Norway." Do you agree with the statement? Give reasons
      to support your answer.
b.   Write the difference between genetic diversity and species diversity that exists at all the levels of
      biological organization.
15.   a. Sickle cell anaemia in humans is a result of point mutation. Explain.
         b. Write the genotypes of both the normal parents who have produced a sickle celled
   anaemic offspring.

OR

How are the structural genes activated in the lac operon in *E.coli*?
16.   What is 'biofortification'? Write its importance. Mention the contribution of IARI towards it with
         the help of two examples.
17.   Each cycle of PCR essentially doubles the amount of DNA from previous cycle. Explain.
18.   Describe any three strategies adopted by flowering plants to prevent self-pollination.
19.   Explain the three different ways in which natural selection can affect the frequency of a heritable trait
         in a population.
20.   Mention the cause of ADA deficiency in humans. How has genetic engineering helped patients
         suffering   from it?
21.   A paternity dispute case for a child has reached the court for which there is no defined evidence.
        Propose and describe an alternative solution which can settle this dispute without any suspicion.

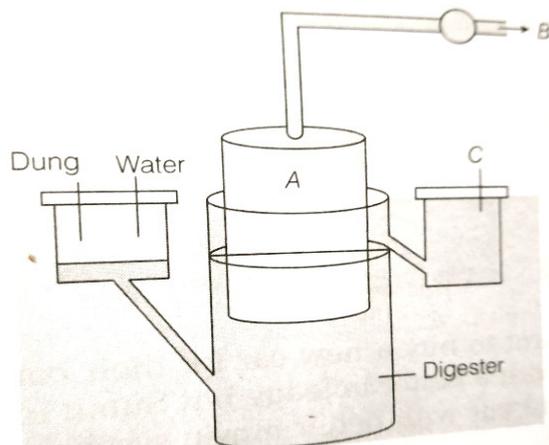22.
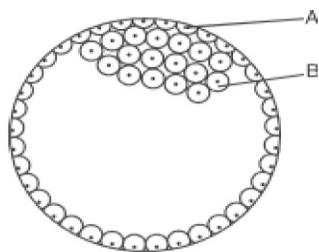
     a. Name the stage of human embryo the figure represents.
     b. Identify 'A' and mention its function.
     c. Identify 'B' and mention its fate after implantation in the uterus.

23.

     a. Identify 'A' and justify its floating nature.
     b. Identify the products 'B' and 'C' and discuss their significance/uses.
24. How does a water body age naturally? Explain. State how this phenomenon of aging gets accelerated?

SECTION-E

25. a. Inheritance pattern of ABO blood group in humans show dominance, co-dominance and
     multiple allelism. Explain each with the help of blood group phenotypes.
   b. "Phenylketonuria is a good example that explains pleiotropy." Justify.

OR

   a. Describe the various steps of Griffith's experiments that led to the conclusion of the
   transforming principle.
   b. How did the chemical nature of transforming principle get established?
26. Explain the following
     a. Why are green algae not likely to be found in deepest strata of the ocean?
     b. Why do clown fish and sea anemone pair up?
     c. What adaptive features help the parasite to live on their hosts?
     d. Why do people feel uncomfortable after reaching high altitude regions?
     e. Population growth curve when resources are limited.

OR

   a. How does an electrostatic precipitator work to remove pollutants released from the

thermal power plants?
   b. What is El Nino effect?
   c.   Why is CNG preferred to diesel as a fuel in vehicles?

27.   Describe the asexual and sexual phases of life cycle of *Plasmodium* that cause malaria in
      humans with a well labeled diagram.
                                        OR
   a. Explain out breeding, out crossing and cross breeding practices in animal husbandry.
   b. Name the prominent south Indian and north Indian species of sugarcane with their
   characters used for cross breeding. List the desired qualities of the hybrid obtained from this cross.

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