



# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI

Time- 3 Hrs.

Subject:- Physical Education

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.*

1. Define skill. [1]
  2. What do you mean by sports psychology? [1]
  3. What is dynamic equilibrium? [1]
  4. What do you mean by human anatomy? [1]
  5. What is circulatory system? [1]
  6. Define Elasticity. [1]
  7. What is a joint? [1]
  8. What is specific warming -up? [1]
  9. Define centre of gravity. [1]
  10. What are the traits of ectomorphs? [1]
- OR**
- What do you mean by fast twitch fibres?
11. Define adventure sports. [1]
  12. What is Pranayama? [1]
- OR**
- What is overload?
13. Who can participate in Paralympic Games. [1]
  14. Define speed. [1]
- OR**
- Name any two free hand exercise.
15. Write about the Olympic flag? [1]
  16. What is neuro-muscular Co-ordination? [1]
  17. Define technique. [1]
  18. What do you mean by Rock climbing? [1]

19. What is Doping? [1]

**OR**

\_\_\_\_\_ bring the impure blood to the heart from every part of the body.

20. Define limbering down? [1]

21. Describe any three objectives of adventure sports. [3]

22. Explain the methods of warming - up. [3]

23. Differentiate between growth and development. [3]

**OR**

Enlist the objectives of Physical Education and explain any one of them.

24. Elaborate the developmental characteristic during infancy. [3]

25. Explain any three principles of sports training. [3]

**OR**

Write the rules for competition in ancient Olympic Games.

26. Write any six functions of circulatory system. [3]

27. Elaborate the various leadership qualities one inculcates by participating in adventure sports. [3]

28. Explain any three Niyamas of Yoga. [3]

29. Discuss the need of inclusive education. [3]

**OR**

Explain the type of Dynamic Strength.

30. Explain in brief the side effects of anabolic steroids. [3]

31. Explain the various characteristic of adolescence. [5]

**OR**

Explain the types of doping.

32. What is respiratory system? Explain the types of respiration. [5]

33. Write notes on: [5]

(a) River Rafting (b) Trekking

34. Elucidate the importance of test, measurement and evaluation in the field of sports. [5]

**OR**

Elucidate the management of problems of adolescence.



# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 2 Hrs.

Subject:- Fine Art Graphics / Painting  
M.M.-30

## Section First

*Answer to be written for each question in a word or sentence. (Any six)*

(1×6 = 6)

- Name the material and excavation site of Dancing Girl.
- Tower of victory is called\_\_\_\_\_.
- What is Sculpture?
- Chauri Bearer sculpture of Mauryan period is from which place?
- The 24<sup>th</sup> Jain Tirthankara is known as \_\_\_\_\_.
- Name of Mathura Sculpture?
- Write about the location of Cymbal Player.

## Section Second

*Answer to be written for each is about 30 words . (Any Three)*

(2×3 =6)

- What is Stupa ? Name of any Stupa ? What is Vihara and Chaitya ?
- What are the social and moral values depicted in the sculpture 'Trimurti'?
- What is Gandhara Style of art ? Write with an example ?
- Discuss in brief about the cave paintings of Bhimbetika.
- Write about the 'Ravana Shaking Mount Kailash' location, period, medium, subject, short description.

## Section Third

*Answer to be written for each is about 100 words.(Any Two)*

(3×2 =6)

- Mother and Child, Dilwara Temple.
- Write a note on any one painting of Ajanta.
- What do you know about terracotta? Write about the terracotta art works found at Indus Valley Civilization.
- Write a note on the compositional arrangement of 'Lion Capital' of Sarnath.

## Section Fourth

*Answer to be written for each is about 200 words. (Any one)*

(6×1 =6)

- What are the basic characteristics of Indian Temple Architecture? Describe Lakshmi Naryan Temple, Khajuraho.
- What are the characteristics of Indo-Islamic architecture? Appreciate the any of Indo-Islamic architecture and specifications

## Section Fifth

*Answer to be written for each is about 300 words.(Any one)*

(6×1 =6)

- Describe in detail about the compositional arrangement of Natraj sculpture and its symbolic representation.
- Explain the composition of the panel 'Descent of Ganga'.

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 2 Hrs.

Subject:- Dance (Odissi)  
M.M.- 30

## General Instructions:-

1. Attempt any five questions.
2. All questions carry equal marks.

1. Write the meaning of Natyadharmi and Lokadharmi. [5]

**OR**

Brief explanation of the following terms: - Nritya , Nritya and Natya.

2. Write the notation of the sthyi ukuta/ dharana of Ektaali. [5]
3. Short note on myths related the concept of Vastra haran. [5]
4. Brief explanation of the five segments of the basic repertoire of Odissi: [5]  
a. Managalacharan                      b. Battu                      c. Pallavi                      d. Abhinaya                      e. Mokshya
5. State the difference between Natraj and Dashavatar. [5]
6. Define Tandav and Lasya. [5]

**OR**

Short note on Mahari dance.

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दिल्ली पब्लिक स्कूल, राँची  
वार्षिक परीक्षा (2019-20)

कक्षा— ग्यारह  
समय— 2 घंटे

विषय—संगीत  
पूर्णांक — 30

निर्देश — सभी खण्ड कीजिए , खण्ड – I अनिवार्य है।

खण्ड – I

1. सही उत्तर को इंगित ( $\sqrt{\quad}$ ) कीजिए। [1x6=6]
- अ राग जौनपूरी किस थाट का राग है?
- (i) भैरवी (ii) खमाज (iii) काफी (iv) आसावरी
- ब रे, ग, ध, नि स्वर कोमल प्रयोग होने वाले राग:
- (i) जौनपूरी (ii) भैरवी (iii) बिहाग (iv) भीमपलासी
- स किस राग को प्रातः काल गाया बजाया जाता है?
- (i) जौनपूरी (ii) भैरवी (iii) बिहाग (iv) भीमपलासी
- द चारताल में विभाग व्यवस्था
- (i) 1 2 3 | 4 5 6 | 7 8 9 | 10 11 12  
(ii) 1 2 3 4 | 4 5 7 8 | 9 10 11 12  
(iii) 1 2 3 4 5 | 6 7 8 | 9 10 11 12  
(iv) 1 2 | 3 4 | 5 6 | 7 8 | 9 10 | 11 12
- इ राग भीमपलासी के आरोह में कौन से स्वर वर्जित है?
- (i) रे – प (ii) ग – प (iii) म – नी (iv) रे – ध
- फ दादरा ताल में खाली किस मात्रा पर आती है?
- (i) पहली मात्रा (ii) दूसरी मात्रा (iii) चौथी मात्रा (iv) पाँचवी मात्रा

खण्ड – II

[3x2=6]

2. निम्नलिखित में से किन्हीं तीन को परिभाषित कीजिए:
- (i) ध्रुपद (ii) ख्याल (iii) स्वर (iv) मार्गी (v) देशी (vi) निबद्ध – अनिबद्ध गान
- अथवा
- निम्नलिखित में से किन्हीं दो का संगीत में योगदान का संक्षिप्त वर्णन कीजिए।
- (i) वी० डी० पलुस्कर (ii) वी० एन० भातखण्डे (iii) तानसेन

खण्ड – III

[1x6=6]

3. निम्नलिखित स्वर समुदायों से राग पहचान कर किसी एक पहचान किए हुए राग में द्रुत ख्याल की स्वरलिपि लिखिए।

(i) म प ध्र म प ग s रे म प

(ii) नि सा ग रे सा, रे नि सा म , म प ग म ग म ग रे सा।

(iii) म ग रे ग , सा रे सा , ध्र नि सा ।

**अथवा**

तानपुरे के विभिन्न भागों का वर्णन करते हुए उसके मिलाने की विधि लिखिए।

खण्ड – IV

[1x6=6]

4. एकताल में ठाह एवं दुगुन तथा कहरवा ताल में दुगुन व चौगुन को ताल लिपिबद्ध कीजिए।

**अथवा**

सम, ताली और खाली की परिभाषा लिखते हुए तीन ताल में सम, ताली व खाली को चिह्न सहित दर्शाए।

खण्ड – V

[1x6=6]

5. भरत के 'नाटयशास्त्र' का संक्षेप में वर्णन करें।

**अथवा**

ख्याल गायकों के किन्हीं तीन घरानों का संक्षिप्त विवरण करें।

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 3 Hrs.

Subject:- Entrepreneurship  
M.M.- 70

## General Instructions:-

1. Section A contains 17 objective questions carrying 1 mark each.
2. Section B contains 7 questions carrying 2 marks each. Answers may be written within 50 to 75 words.
3. Section C contains 5 questions carrying 3 marks each. Answers may be about 100 words.
4. Section D contains 3 questions carrying 4 marks each. Answers may be about 150 words.
5. Section E contains 2 questions carrying 6 marks each. Answers may be about 200 words.

## SECTION: A

1. Which of the following methods can be used to fund a startup? [1]  
(a) Venture Capital      (b) Bootstrapping      (c) Seed Capital      (d) All the above
2. Which of the following is a recognizable sign, design or expression that distinguishes products or services of a particular trader from the similar products or services of other traders? [1]  
(a) Copyright (b) Patents      (c) Trademark      (d) None of these
3. Name any two startup ideas which brought in a new stream of energy in the Indian startup eco system. [1]
4. Finance is required at the time of \_\_\_\_\_ [1]  
(a) Starting of the business      (b) Running of the business  
(c)Expansion of the business      (d) All the above
5. Which of the following is not an International source of Finance ? [1]  
(a) GDR      (b) ADR      (c) Inter Corporate Deposits      (d) None of these
6. State True or False for the following statement. [1]  
'The investors who are willing to assume risk in pursuit of higher returns may not prefer Preference Shares.'
7. State True or False for the following statement. [1]  
' A company cannot be created without the issue of Equity Shares.'
8. Which of the following is not a feature of Entrepreneurship? [1]  
(a) An economic activity      (b) Does not involve any risk  
(c) Dynamic in nature      (d) A purposeful activity
9. The cost incurred by a company to produce, store and sell one unit of a particular product is referred to as \_\_\_\_\_ [1]

10. The business is at neither \_\_\_\_\_ nor \_\_\_\_\_, when it is at BEP. [1]
11. These industries deal in products which involve successive stages for manufacturing finished products. [1]  
 (a) Synthetic Industry (b) Assembling Industry  
 (c) Processing Industry (d) Analytical Industry
12. The Productivity of a business is measured in terms of ratio between \_\_\_\_\_. [1]  
 (a) Human and Physical Resources (b) Physical and Financial Resources  
 (c) Input and Output (d) Target set and Target Achieved
13. These industries are engaged in production of products for final consumption and creating form utilities. [1]  
 (a) Genetic Industries (b) Manufacturing Industries  
 (c) Extractive Industries (d) Construction Industries
14. The Entrepreneurs who undertake Agricultural as well as allied activities in the field of agriculture are known as \_\_\_\_\_. [1]  
 (a) Non-Technical entrepreneurs (b) Corporate entrepreneurs  
 (c) Agricultural Entrepreneur (d) Trading Entrepreneur
15. Which of the following are Entrepreneurial Competencies? [1]  
 (a) Initiative (b) Creativity and Innovation (c) Problem Solving (d) All of these
16. What do you mean by 'Business Ethics'? [1]
17. What do you mean by Joint Venture? [1]

**SECTION : B**

18. Draw a flow chart for channels of distribution. [2]
19. What do you mean by Brainstorming? [2]
20. What is the difference between Expenditure and Expense? [2]
21. What is the need of Entrepreneurship in an economy? Explain any two points. [2]

**OR**

- Differentiate between Entrepreneur and Entrepreneurship. [2]
22. Explain the following briefly.  
 (a) e-Business (b) e-Commerce
23. Write short notes on the following. [2]  
 (a) NSIC (b) DIC
24. What do you mean by Debentures? List the types of Debentures. [2]

**OR**

What do you mean by Equity Share Capital? Give any two advantages of Equity Share Capital for the company.

**SECTION - C**

25. What do you mean by Commerce? Give the classification with the help of flow chart and explain the same in brief. [3]

**OR**

Explain any three Auxiliaries to Trade briefly.

26. Define Entrepreneurial values and summarize the values with the help of diagram. [3]

27. Match the following Items being sold/serviced by different suppliers and their unit of sale. [3]

(a) Garment shop	(i) Kilogram
(b) Fruit Vendor	(ii) Liter
(c) Real Estate/ Apartment	(iii) Meter of Fixed Width
(d) Consultant	(iv) Time/Hour
(e) Textiles	(v) Square feet
(f) Dairy	(vi) Piece/Dozen/Kilogram

28. Explain the following:

- (a) Trailblazers (b) Go-getters [3]

29. Mr. Gopal, a Tea Vendor has a goal of achieving a daily profit of Rs. 600. What should be his sales target per day when his Fixed Cost per day is Rs. 420, Unit Price is Rs. 5 per cup and Unit Cost is Rs. 3.50 per cup. [3]

**OR**

Fixed cost of a Trader dealing in supply of Coffee is Rs. 840, The Selling Price per cup is Rs. 10 and the Variable cost (unit cost) is Rs. 7 per cup. Find out the B.E.P.

**SECTION - D**

30. Explain briefly any two Entrepreneurial functions. [4]

**OR**

Explain any Four Managerial functions briefly.

31. What do you mean by a 'Business Plan'? List any four purposes of a Business Plan. [4]

32. Explain the Feasibility Studies briefly. [4]

**SECTION - E**

33. What do you mean by Motivation? Explain Maslow's Hierarchy of Needs Theory with the help of Flow chart. [6]

**OR**

Explain the four types of Entrepreneurs and give suitable examples of the same.

34. What do you mean by marketing Mix? State the benefits of the elements of Marketing Mix. (2 points each) [6]

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 3 Hrs.

Subject:- Physics  
M.M.- 70

## General Instructions :-

- All questions are compulsory. There are 37 questions in all.
- This question paper has four sections – Section A, Section B, Section C and Section D.
- Section A contains 20 questions of 1 mark each.  
Section B contains 7 questions of 2 marks each.  
Section C contains 7 questions of 3 marks each.  
Section D contains 3 questions of 5 marks each.
- There is no overall choice. However, internal choice have been provided in two questions of 1 mark, two questions of 2 marks, one question of 3 marks and three questions of 5 marks weightage. You have to attempt only one of the choices in such questions.

## Section-A

- Parsec is the unit of :-  
(a) time                      (b) distance                      (c) frequency                      (d) angular momentum
- A body starts from rest. What is the ratio of the distance traversed by it during the 4<sup>th</sup> and 3<sup>rd</sup> second?  
(a)  $\frac{7}{5}$                       (b)  $\frac{5}{7}$                       (c)  $\frac{7}{3}$                       (d)  $\frac{16}{9}$
- A particle is moving such that its position coordinates (x,y) are (2m , 3m) at t= 0, (6m , 7m) at t = 2s and (13 m , 14 m) at t = 5s.  
The average velocity vector ( $\vec{v}_{avg}$ ) from t = 0 to t = 5s is  
(a)  $\frac{1}{5} (13 \hat{i} + 14 \hat{j})$                       (b)  $\frac{7}{3} (\hat{i} + \hat{j})$                       (c)  $2 (\hat{i} + \hat{j})$                       (d)  $\frac{11}{5} (\hat{i} + \hat{j})$
- Two blocks A and B of masses 2m and m respectively are connected by a massless and inextensible string. The whole system is suspended by a massless spring as shown. The magnitudes of acceleration of A and B, immediately after the string is cut will be:-  
(a) g, g/2                      (b) g/2, g                      (c) g, g                      (d) g/2, g/2
- A block having mass m collides with another stationary block having mass 2m. The lighter block comes to rest after collision. If the velocity of the first block is v, then the value of coefficient of restitution will be:-  
(a) 0.5                      (b) 0.4                      (c) 0.6                      (d) 0.8
- Four point masses, each of value m, are placed at the corners of a square ABCD of side l. The moment of inertia of this system about an axis passing through A and parallel to BD is  
(a)  $ml^2$                       (b)  $3 ml^2$                       (c)  $\sqrt{2} ml^2$                       (d)  $\sqrt{3} ml^2$

**OR**

Four thin rods, each of mass  $m$  and length  $l$ , form a square frame. Moment of inertia of this frame about an axis through the centre of the square and perpendicular to its plane is

- (a)  $\frac{14}{3} ml^2$                       (b)  $\frac{4}{3} ml^2$                       (c)  $\frac{2}{3} ml^2$                       (d)  $\frac{11}{3} ml^2$

7. A particle falls towards the earth from infinity. Its velocity on reaching the earth would be:-

- (a)  $\sqrt{2gR}$                       (b)  $2\sqrt{gR}$                       (c) infinity                      (d) zero

8. If a liquid neither rises nor falls in a capillary tube, then the angle of contact will be

- (a)  $0^\circ$                       (b)  $180^\circ$                       (c)  $90^\circ$                       (d) none of these

9. The fundamental frequency of a closed organ pipe of length 20 cm is equal to the second overtone of an organ pipe open at both the ends. The length of the open organ pipe is:-

- (a) 100 cm                      (b) 140 cm                      (c) 120 cm                      (d) 80 cm

10. Which of the following parameters does not characterize the thermodynamic state of matter?

- (a) Temperature                      (b) Pressure                      (c) Volume                      (d) Work

Fill in the blanks: -

11. A body A is thrown up vertically from the ground with a velocity  $u$  and another body B is simultaneously dropped from a height  $H$ . They will meet at height  $H/2$  if  $u$  is equal to \_\_\_\_\_ .

12. Area under the force -time graph gives \_\_\_\_\_.

13. There are  $n$  bullets fired in 1 sec by a gun. The mass of each bullet is  $m$  and each has speed  $v$ . The average force of recoil will be \_\_\_\_\_.

14. A particle performing uniform circular motion has angular momentum  $L$ . If its angular frequency is doubled and K.E. halved, its new angular momentum will be \_\_\_\_\_.

15. The S.I. unit of coefficient of thermal conductivity ( $K$ ) is \_\_\_\_\_ .

16. Name a physical quantity with the same dimensional formula as that of  $(kx)$  in the equation  $y = r \sin (wt + kx)$  . (The notations carry their usual meaning).

17. The displacement of a body is proportional to the cube of the time elapsed. What is the nature of the acceleration of the body?

18. A wire is cut to half its original length . What will be the change in the maximum load it can support without exceeding the elastic limit?

19. An incident wave represented by  $y = A \sin (wt - kx)$  suffers reflection at a rigid boundary. Write down the equation representing the reflected wave.

20. Write down the expression for the 1<sup>st</sup> law of thermodynamics for a cyclic process.

**OR**

State the second law of thermodynamics.

### **Section-B**

21. Draw the following graphs representing the motion of an object under free fall. Neglect air resistance.
- (a) Variation of position with respect to time
  - (b) Variation of velocity with respect to time
22. Derive an expression for the terminal velocity of a spherical body falling through a viscous medium. Use appropriate diagram.

**OR**

The edge of an aluminium cube is 10 m long. One face of the cube is firmly fixed to a vertical wall. A mass of 100 kg is then attached to the opposite face of the cube. The shear modulus of aluminium is 25 GPa. What is the vertical deflection of this face?

23. State and prove Work-Energy theorem.
24. Find the moment of force about the point (1, -1, -1), when a force  $3\hat{i} + 4\hat{j} - 5\hat{k}$  acts at the point (1, 0, -2)
25. Show, graphically, the variation of friction with the force applied on a stationary body till it is set into motion. State two laws of limiting friction.
26. A ball, moving with a momentum of 5 kgm/s strikes against a wall at an angle of 45° and is reflected at the same angle. Calculate the change in its momentum.
27. Derive an expression for the total energy of a simple harmonic oscillator.

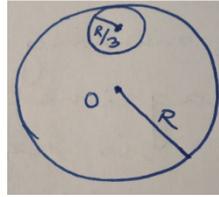
**OR**

The time period of a body of mass  $m$ , suspended by a spring, of force constant  $k$ , is  $T$ . What will be the new period if the spring is cut into two equal parts and when (i) the body is suspended from one part (ii) the body is suspended from both the parts connected in parallel?

### **Section - C**

28. (a) The viscous force  $F$  acting on a body of radius ' $r$ ' moving with velocity  $v$  in a medium of coefficient of viscosity is given by  $F = 6\pi r\eta v$ . Check the correctness of the formula.
- (b) The frequency  $f$  of vibration of a stretched string depends upon
- (i) its length ' $l$ '
  - (ii) the mass per unit length  $m$
  - (iii) the tension  $T$  in the string
- Obtain, dimensionally, an expression for the frequency  $f$ .
29. What is a heat engine? Draw a block diagram of a heat engine and obtain an expression for its efficiency.

30. Derive expressions for the final velocities of two bodies undergoing elastic collision in one dimension.
31. From a circular disc of radius  $R$  and mass  $9M$ , a small disc of radius  $R/3$  is removed. Find the moment of inertia of the remaining disc about an axis perpendicular to the plane of the disc and passing through the centre  $O$  of the original disc.



32. Derive an expression for the excess pressure inside a soap bubble.
33. Obtain analytically, an expression for beat frequency.

**OR**

- (i) What is meant by Doppler's effect?
- (ii) A police car moving at  $22 \text{ m/s}$ , chases a motor cyclist. The policeman sounds his horn at  $176 \text{ Hz}$ , while both of them move towards a stationary siren of frequency  $165 \text{ Hz}$ . Calculate the speed of the motorcycle, if the motorcyclist does not observe any beats.
34. A ball is projected horizontally with a speed  $u$  from the top of a tower whose height is  $h$ .  
Derive (a) the equation of its trajectory  
(b) the expression for the velocity of the ball at a point in its path before it strikes the ground.

### Section - D

35. Derive the 'ascent formula' for a liquid rising in a capillary tube.  
Explain mathematically, what happens if the tube is of insufficient length.

**OR**

State and prove Bernoulli's theorem, using a relevant diagram.

The reading of the pressure metre attached with a closed pipe is  $3.5 \times 10^5 \text{ Pa}$ . On opening the valve of the pipe, the reading of the pressure metre is reduced to  $3 \times 10^5 \text{ Pa}$ . Calculate the speed of the water flowing in the pipe.

36. Show, analytically, the formation of stationary waves in stretched strings. Also discuss the various modes of vibrations in it.

Mention 2 differences between progressive and stationary waves.

**OR**

Show , mathematically, that the motion of a simple pendulum is simple harmonic. Also derive an expression for it's time period.

A body of mass 0.1 kg is executing SHM according to the equation.

$$y = 0.5 \text{ Cos } (100 t + \frac{3\pi}{4}) \text{ metre}$$

Find

- (a) frequency (b) maximum velocity  
(c) maximum acceleration and (d) total energy of the oscillator

37. With reference to satellites, derive expressions for

- (a) orbital velocity (b) time period and (c) total energy

What are geostationary satellites? Derive an expression for the height of a geostationary satellite.

**OR**

Show mathematically, the variation of acceleration due to gravity (g) with

- (i) altitude ( $h \ll$  radius of the earth R)  
(ii) depth (d) from the surface of the earth.

Two particles, each of mass m, go round a circle of radius R under the action of their mutual gravitational attraction. Find the speed of each particle.

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# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 3 Hrs.

Subject:- Accountancy  
M.M.- 80

### General Instructions :-

1. This question paper consist 32 questions.
2. All parts of a question should be attempted at one place.

1. What is capital? [1]
2. The persons who still owe some amount to the business are termed as ..... [1]
3. Only those facts and events are recorded in accounting which are capable of being expressed in terms of money. Whether the statement is true or false. [1]
4. According to principal of conservation closing stock is valued at:- [1]  
(a) At cost price (b) At Realisable value  
(c) Cost price or realizable value whichever is less (d) At Real value
5. Goods worth Rs. 5000 given away as charity would be credited to [1]  
(a) Sales (b) Purchase A/c (c) Charity A/c (d) Trusted A/c
6. Bought Machinery on credit Rs. 10000. Journalise. [1]
7. Cash Rs. 10,000 were stolen from the Iron Safe of the trader Journalise. [1]
8. Recording is made in Journal Proper of: [1]  
(a) Opening Entries (b) Closing Entries (c) Adjustment Entries (d) All of the above
9. What is meant by debit balance in Pass Book? [1]
10. What is bank reconciliation statement? [1]
11. Give a definition of Bill of Exchange? [1]
12. The fee charged for getting the bill noted after its dishonor is called ..... [1]
13. What do you mean by Suspense Account? [1]
14. Sale of Computer that has been used in office should be credited to [1]  
(a) Sales (b) Cash (c) Capital (d) Computer
15. Cost of obtaining license to carry out business is a Capital Expenditure or Revenue Expenditure? [1]
16. Goods worth Rs. 100000 were burnt by fire and a claim of Rs. 60000 has been accepted by the Insurance Company. How it will be recorded in Final Accounts? [1]

17. What journal entry will be passed for outstanding Manager Commission? [1]
18. In the single Entry System which two methods are used to ascertain profit or loss? [1]
19. Which accounting principle is certainly followed under single entry as well as Double Entry System? [1]
20. Write two limitations of Computerised Accounting System? [1]
21. Prepare Sales Book from the following transactions of Novketan Furniture House. 2020
- Jan 1 Sold goods to Five Star Furniture Co. New Delhi on Credit  
150 chairs @ Rs. 200 each  
40 Tables @ Rs. 600 each  
Discount 10%
- Jan 5 Sold goods to Vishal Furniture House Ranchi  
10 Almirahs @ Rs. 2000 each  
5 Sofa Set @ Rs. 3000 each  
Trade Discount 15 %
- Jan 10 Sold goods to Parkash Furniture House Patna  
100 chairs @ Rs. Rs. 180 each  
Trade Discount @ 5 %
- Jan 20 Sold goods to Moonlight Furniture Gaya  
50 chairs @ Rs. 175 each [3]
22. Pass journal entry in the books of Sanjay, Ranchi 2020
- Jan 7 Goods purchased for cash from Patna Rs. 10000. Rate of GST 12 %
- Jan 12 Goods sold to Ramesh for cash Rs. 20000 rate of GST 12% .
- Jan 20 Machine Purchased Rs. 100000 from Delhi rate of GST 18 % Payment made by cheque. [3]
23. Prepare Bank Reconciliation Statement on 31.12.2019  
Overdraft balance as per Cash Book Rs. 10000  
Cheque issued but not presented for payment Rs. 1000  
Cheque deposited but not credited Rs. 2000  
Dr side of Cash Book under cast by Rs. 100  
Interest allowed by bank not recorded in Cash Book Rs. 500  
Commission charged by bank not recorded in cash book Rs. 100  
Interest on overdraft not recorded in Cash book Rs. 200 [4]
24. On 01.04.2019 A sold goods to B for Rs. 10000 and received an acceptance for 2 months. On 03.04.2019 A discounted the bill with bank at Rs. 9700. On due date B requests A to take Rs. 5000 in cash and draw a new bill for 1 month for the balance amount with interest Rs. 500. A agreed. On due date B paid the amount if bill. Pass entries in the books of A only. [4]

25. On 01.04.2015 X Ltd purchase a machine for Rs. 200000. It was sold on 01.01.2018 at a profit of 20% on sale. Depreciation is provided @ 10 % p.a. on WDVM on 31<sup>st</sup> March every year. Prepare Machine Disposal Account on 01.01.2018 (Provision for Depreciation A/c is maintained in the books) [4]
26. Explain four advantages of Computerised Accounting System. [4]
27. Trial Balance as on 31.03.2019

Particular	Amount	Amount
	Rs.	Rs.
Machinery	200000	-----
Provision for Depreciation in Machinery	-----	30000
Salary	33000	-----
Debtors	101000	-----
Bud Debts	1000	-----
Provision for Bad Debts		3000

- Adjustments :-
- (i) Further Bad Debts amounted to Rs. 1000
  - (ii) Provisions for Bad and Doubtful Debts increased to 5% of Debtors
  - (iii) Salary due for 1 month
  - (iv) Depreciate Machinery by 10 % on WDVM.

How will you disclose the above information in Final A/c of a Trading Concern. [4]

28. Record the following transactions in Double column Cash Book (Cash with Bank)

2020

- Jan 1 Cash inhand Rs. 10000 , Cash at Bank Rs. 50000 (Cr.)
- Jan 5 Personal investment sold Rs. 100000 and the amount deposited into business bank a/c
- Jan 8 A cheque of Rs. 10000 issued to creditors
- Jan 11 Cash withdrew from bank for office use Rs. 20000
- Jan 14 A cheque of Rs. 10000 deposited into bank (Cheque received from debtors)
- Jan 17 Interest charged by bank Rs. 3000
- Jan 19 Dividend collected by bank Rs. 10000
- Jan 24 Shares purchased Rs. 20000
- Jan 27 Salary paid by cheque Rs. 10000
- Jan 31 Goods sold for cash Rs. 30000

[6]

29. On 1<sup>st</sup> April 2015 X Ltd purchased a machine for Rs. 100000. Additions were made on 31.12.2015 and on 01.10.2016 for Rs. 400000 and Rs. 200000 respectively on 01.01.2018 1<sup>st</sup> Machine was sold at a profit on 20% on selling price. Depreciation is provided @ 10% p.a. on WDVM on 31<sup>st</sup> March every year. Prepare Machine Account for 3 Years ended 31.03.2018. [6]

30. Rectify the following errors :-

- (i) Rent paid to Land Lord Rs. 10000 debited to his personal A/c
- (ii) Wages paid for installation of Machine Rs. 10000 debited to wages A/c
- (iii) Bad Debts recovered Rs. 500 credited to Debtors A/c
- (iv) Commission received from Ajay Rs. 5000 credited to Ajay A/c
- (v) Shares purchased Rs. 10000 not recorded in the books
- (vi) Computer purchased for resale Rs. 100000 debited to computer A/c.
- (vii) Paid for repair of Building Rs. 20000 debited to Building A/c
- (viii) Goods taken form business for personal use Rs. 1000 not recorded in the books.
- (ix) Goods sold on sale or return basis Rs. 20000 not recorded in the books.
- (x) Rent received from Anil Rs. 5000 credited to Anil A/c
- (xi) Depreciation on Machine Rs. 10000, not recorded in the books.
- (xii) Cash withdrew from business for personal uses not recorded books Rs. 1000. [6]

31. Following is the Assets and Liabilities of Mr. X on 01.04.2018 and on 31.03.2019

Particulars	31.03.2018	31.03.2019
	Rs.	Rs.
Cash in hand	10000	20000
Cash at Bank	100000	1,50,000
Stock	250000	350000
Sundry Debtors	170000	200000
Investment	100000	100000
Plant and Machinery	200000	180000
Land and Building	500000	500000
Sundry Creditors	100000	150000
Bank Loan	200000	200000

During the year Mr. X withdrew Rs. 100000 from business for personal use. On 01.10.2018 additional capital introduced in business Rs. 50000. Bad Debts amounted to Rs. 10000. Depreciate plant and Machinery by 10 % and Land and Building by 5 %.

Prepare a statement of Profit and Loss for the year ended 31.03.2019 and a Balance sheet as on that date. [8]

32. The Trial Balance of Mr. Sun as on 31.03.2019 was as follows: -

	Dr. Amount Rs.	Cr. Amount Rs.
Cash in hand	1080	_____
Cash at Bank	5260	_____
Purchase / Sales	81350	197560
Returns	1360	1000
Wages	20980	_____
Fuel and Power	9460	_____
Carrying on Sales	6400	_____
Carrying Purchases	4060	_____
Stock (01.04.2018)	11520	
Building	60000	_____
Freehold Land	20000	_____
Machinery	40000	_____
Salaries	30000	_____
Patents	15000	_____
General Expenses	6000	_____
Insurance	1200	_____
Drawings / Capital	10490	142000
Sundry Debtors / Sundry Creditors	<u>29000</u>	<u>12600</u>
	<u>353160</u>	<u>353160</u>

Taking into account the following adjustments. Prepare Trading and Profit and Loss Account for the year ended 31.03.2019 and A Balance Sheet as on that date

- (a) Stock (31.03.2019) Rs. 13600
- (b) Machinery is to be depreciated @ 10 % p.a. and patent @ 20 % p.a.
- (c) Salaries for the month of March 2019 amount to Rs. 3000 were unpaid.
- (d) Insurance includes a premium of Rs. 170 for 2019-20
- (e) Works manager is entitled for commission @ 5 % on Gross Profit.

[8]

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 3 Hrs.

Subject:- Political Science  
M.M.- 80

**General Instructions:**

- All questions are compulsory.
- Answer to one mark question 1 to 17 should not exceed 20 words.
- Answer to two marks question 18-20 should not exceed 40 words.
- Answer to four marks question 21-24 should not exceed 100 words.
- Answer to five marks are 25 -28 should be answered as directed.
- Answer to six marks questions 29-32 should not exceed 150 words.

1. Which article of the Indian constitution provides for president's rule in any state? [1]
2. What is constitution? [1]
3. What do you mean by FPTP system? [1]
4. Name the following:- [1x2=2]
  - a. An executive headed by a monarch
  - b. An executive headed by the president
5. Explain the term Feminism. [1]
6. What do you understand by Bill of Rights? [1]
7. Briefly explain the writ of Mandamus. [1]
8. What does NRC stands for?
9. The Citizenship Amendment Act, 2019(CAA) amends the \_\_\_\_\_ Act of \_\_\_\_\_ [1x2=2]
10. Explain:- [1x3=3]
  - a) The Question Hour
  - b) The Adjournment Motion
  - c) No Confidence
11. What is judicial review? [1]
12. Explain the term Feminism. [1]
13. Which book was written by Plato? [1]
14. Who in 19<sup>th</sup> century glorified war? [1]
15. What do you mean by global citizenship? [1]
16. State the only difference in election method of President and the Vice-president of India. [1]

17. What does Article for 1 of the Indian Constitution state? [1]
18. What is the original jurisdiction of the supreme court of India? [2]
19. Name four states in India having bicameral legislatures. [2]
20. What is meant by 'Secular'. Illustrate in the preface of Indian constitution. [2]
21. Explain Harm Principal as given by JS Mill. [4]
22. How has public Interest Litigation helped the poor? [4]
23. Peace can be best realised when there is Freedom, Equality and Justice. Do you agree? [4]
24. Explain John Rawls theory of justice ? [4]
25. We cannot expect anyone to put aside their personal interests and think of the good of the society, especially if they believe that their decision is going to have an impact on the kind of life and opportunities their children will have in future. But such perspectives cannot form the basis of a theory of justice for a society.

Answer the following questions based on the above passage.

- i) Briefly explain the theory of justice that tries to help establish a just society.
- ii) What are the merits of this theory?
- iii) It is often said that it is not easy to erase our identities and to think according to this theory. Still, this theory is highly recommended. Why? [5]
26. Answer the following questions based on image given below.
- i) Explain inequality and intolerance as components of terrorism.
- ii) Explain one way of eliminating violence.
- iii) Can violence ever promote peace? [5]



27. The independence of India should mean the independence of the whole of India... Independence must begin at the bottom. Thus every village will be a republic... It follows therefore that every village has to be self-sustained and capable of managing its affairs. In this structure composed of innumerable villages, there will be ever-widening, ever-ascending circles. Life will be a pyramid with the apex sustained by the bottom - Mahatma Gandhi

- i. Which concept is Gandhiji explaining in the above passage?
- ii. What are the Gandhiji's views regarding the decentralisation of powers?
- iii. "Do you take decentralisation as a means to minimize the conflicts ?" Give your view point.

[5]



28. What this paper cutting says about? [5]
29. "We have seen that Nationalism can unite people as well as divide them, liberate them as well generate bitterness and conflict." Illustrate your answer with example. [6]
30. What are the obstacles in the way of peace and explain the modern challenge's to establish peace. [6]
31. Migration of people to different regions within the country is often resisted by local inhabitants. Do you think such resistance to outsiders is justified? Discuss. [6]

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI

Time- 3 Hrs.

Subject:-Business Studies

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. In this type of account a fixed amount of money is to be deposited at fixed intervals for a fixed duration of time. Name the account. [1]
2. Why are equity shares not suitable for cautious investors? [1]
3. Suggest any one method through which an organisation can ensure compliance to corporate ethics. [1]
4. If the business fails, the creditors can recover their dues not merely from the business assets, but also from the personal assets of the proprietor. Name the related limitation. [1]
5. Which form of Public Sector is most suitable when national security is concerned? [1]
6. Passion Limited is a well known automobile company in India. In order to reduce dependence on a single supplier the automobile factory works through a network of computers which is used for placing orders. Identify the constituent of e - business being described. [1]
7. What type of Utility is created by Advertising ? [1]
8. Explain the term " Oligarchic management ". [1]
9. What is meant by incorporation of a company? [1]
10. Fashion Hut, a reputed garments manufacturing unit needs to meet its day-to-day expenses like wages, rent, maintaining stock of raw material etc. The owner approaches the supplier of the raw materials to give credit, for two months, so that he can get cloth for making garments without making immediate payment. The supplier made an enquiry regarding the business organisation and found that its reputation was very good. So it extended two months credit to it. Identify the source of finance discussed above. [1]

11. Name the different types of itinerant retailers. [1]
12. It is an instruction to the Captain of the ship that the specified goods after their customs clearance at a designated port be received on board. Name it. [1]
13. What is P3 model of business? [1]
14. Which sector was given a lot of importance in the initial stages of development of the five year plans? [1]
15. Narayan Traders Ltd., is a company that deals in the wholesale business of rice. The finance manager of the company, Mr. Radheshyam Das arranges unsecured short-term finance for the company. The rate of interest to be paid on this finance is more than the bank's rate of interest. Identify the source of finance. [1]
16. The government encourages many people to start small scale industries in rural and backward areas, so that these areas can get employment and thus their economic conditions can improve. Identify the role of small - scale industries referred to in the above para. [1]
17. Identify the type of public sector enterprise which do not have a separate legal entity and have not been constituted as autonomous or independent institutions. [1]
18. Name any two kinds of risks borne by a wholesaler. [1]
19. How would you classify retail trade on the basis of merchandise handled? [1]
20. Explain the expert advice provided by the wholesaler to manufacturer. [1]

**Section - B**

21. Gas authority of India Ltd. (GAIL) is carrying on various projects of energy and power. Majority of its shares are held by the government of India. It was registered under the previous Companies Act. It enjoys all the characteristics of a company. The board of directors are appointed by the government. The Board and shareholders are responsible for the efficient working of the company. The company prepares its annual report and submits to the appropriate authorities.
  - a) Name the type of public sector enterprise referred to in the above para.
  - b) In whose name does the government buy the shares?
  - c) Where does such enterprises submit their reports? [3]
22. Ram, Shyam and Vishnu join together and set up a partnership firm. They do the whole sale trade of Ghee, Sugar and Pulses. They got a document prepared, which stated the different terms and conditions in order to run the partnership organisation smoothly and successfully. Identify the document prepared by the partners and state its any four contents. [3]

**OR**

Mr. Mukul Gupta contracted with a firm. According to the contract he has advanced a loan of Rs. 20,00,000 to the firm and in exchange he has got the power to take few decisions regarding the firm's business. Besides, he got 9% interest on the loan and 12% profits of the firm. Is Mr. Mukul Gupta a partner of the firm? Give reasons in support of your answer.

23. A Ltd. outsources several services instead of doing them itself. Among these services are included advertising service, courier service, etc. Similarly, B Ltd. is getting some services done by other firms such as research and development, business and technical analysis, etc. State, giving reasons, whether the services being outsourced by both these companies are the same. [3]
24. Ganga Ltd. is a popular company manufacturing water coolers. Its product is very much liked by people in the market. The traders are in a race to become the company's distributors. The company had been earning huge profits for many years. However, in the year 2018, the company's half yearly report shows a great decline in the company's profit. The top management is worried about this. A team of specialists from outside is appointed to solve this serious problem. After a thorough examination, the specialists presented the following reasons for the decline in the profits of the company.
- i) Increase in competition and change in taste of the consumers.
  - ii) Theft of cash and goods by the employees.
- Identify and explain the two causes of decline in profits. [1½x2=3]
25. Mention the names of any three types of Hundi, its broader classification and its functions distinctly. [3]

### Section- C

26. What is a letter of credit ? Why does an exporter need this document? [4]
27. Write short notes on :-
- a) National Small Industries Corporation
  - b) The District Industries Centre [2x2=4]

**OR**

Mention and explain any four characteristics of Entrepreneurship.

28. Enumerate and explain in detail any four limitations of a co-operative society.

### Section - D

29. Noori is planning a Startup venture for launching portable air conditioners. These air conditioners will help to save energy to a great extent because of their inbuilt special technology. Furthermore, these air conditioners can be easily transported inside a home or office. Although being competent in terms of technology, Noori is completely ignorant about the different ways to fund a Startup. You are expected to help her in this regard by suggesting any five suitable options for raising finance for her project. [5]
30. Procter and Gamble is a well known company dealing in different types of consumer goods. It specializes in a wide range of personal health/consumer health, and personal care and hygiene products; these products are organized into several segments including Beauty; Grooming; Health Care; Fabric & Home Care ; and Baby, Feminine & Family Care. As a part of its corporate vision the company has certain goals to promote sustainable living. A few of its other goals include to use 100% renewable and recycled materials for all its products and packaging, reduce absolute gas emissions by 30%, reduce energy use by 20% per unit production, ensure plants are powered by 30% renewable energy. Why do you think the company is so much concerned about undertaking concrete steps for pollution control? Explain by giving any five reasons for need for pollution in support of your answer. [5]

31. Daksh is planning to import a special packaging machine from Germany for his business. Being , ignorant about the procedure, he has hired the services an import agent, Mr.Gagan. Mr. Gagan has asked him to first browse through the websites of the exporters who are dealing in desired machinery. Then, he should send a written request to the short listed exporters asking them for the supply of information regarding the price and various terms and conditions on which the latter is ready to exports goods. Mr. Gagan has also informed him, that in response to this request the exporters will forward him a document containing information with respect to the quality, features, design, size, weight and price of the export product along with the terms and conditions on which their export will take place.

Moreover, once the order is confirmed, he will have to get registered with the Directorate General Foreign Trade (DGFT) in order to obtain a special code number which is required to be mentioned on most of the import documents, since,the foreign trade may take place in a different currency, Daksh will also have to apply for foreign exchange.

- a. Identify the two documents being described in the first paragraph of the question.
- b. Briefly explain the next step that Daksh has to take.
- c. To whom does Daksh needs to approach for obtaining foreign exchange?
- d. Write briefly about the step, next to the one mentioned in c. [1+1½+1+1½=5]

**OR**

Ayush is desirous of expanding his business into foreign territory. He has already procured an export order and advised the importer to open a letter of credit in his favour. He has now obtained an export licence and started with the manufacturing of the goods to be exported. His friend , Ayushi has told him that there are four more steps that he needs to perform before reserving a space in the ship for transportation of the goods to the importer.

- a. Enumerate the steps which have already been performed by Ayush.
- b. Describe briefly the four steps which his friend Ayushi has told him to perform before preparing a shipping bill.

**Section - E**

32. Write a detailed note on various allied facilities offered by Indian Postal Department. [6]
33. Krishna Pvt Ltd. is facing the shortage of long-term finance as it is a period of depression in the economy. The experts were consulted to determine the source of finance the company should raise. One financial advisor, Mr. Ram, advised that the company should use such a security on which it has a tax advantage and there is no dilution of control of the share holders. Another financial specialist, Mr Shiv advised that the company should not issue any debt or equity security but raise such a source of long-term finance which can be redeemed in easy instalments.

Quoting the relevant lines from the above para, identify and explain the sources of finance suggested by the two specialists, Mr Ram and Mr. Shiv. Also, state any two merits of each, other than that mentioned in the above para. [6]

**OR**

Madhav Sales Pvt. Ltd. owns the agency of different food products, which sells goods of different brands to retailers after purchasing them from several companies . It purchases almost all goods for cash while its sales are on credit of one month. So the company keeps struggling with the short-term finance. To overcome this problem, the company's finance department held a meeting. The chairperson of the meeting asked the members to express their views on the solution of this problem. The first person said, "we should use a source of finance which does not involve any bureaucracy and legal problems and the market of which, maintains secrecy." The second person's opinion was that the company often needs cash credit and overdraft. Therefore the source of finance should be selected considering this fact. The view of the third person was that the company also should buy goods on credit. The chairperson of the meeting listened to the suggestions of all and, to take the final decision, asked them to be present in a meeting the next week.

Quoting the relevant lines from the above para, identify and explain the sources of finance suggested by different persons.

34. Explain the following terms used in the trade :-

- a) Cost, Insurance and Freight (CIF)
- b) Errors and Omissions Excepted (E & OE)
- c) Free on Board (FOB)
- d) Cash on Delivery (COD)

[1.5 x 4=6]

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 3 Hrs.

Subject:- English  
M.M.- 80

## General Instructions.

1. This paper is divided into three sections: A, B, and C. All the sections are compulsory.
2. Separate instructions are given with each section and question, wherever necessary. Read these instructions very carefully and follow them faithfully.
3. Do not exceed the prescribed word limit while answering the questions.

## Section-A Reading

20marks

1. Read the following passage carefully and answer the questions that follow:

[8]

1. When it comes to drinking water every day, an important question to ask is how much water should you drink? It is a simple question with a not-so-simple answer, just like one size does not fit all, every individual has different hydration needs which depend on a person's health, level of activity and climatic conditions.
2. Water is one of the most important nutrients and contributes about 50-60% to our body weight. Much also depends on an individual's age, gender and body -fat content. We can live without food for almost two months, but we can't survive without water for more than a few days. Water is essential for the body to function normally; dehydration can cause death. Lack of water can lead to malfunctioning of the kidney, which would hinder excretion of uric acid, urea and calcium resulting in kidney stones. Its scarcity can affect electrolyte balance in the body, which could be potentially dangerous causing coma or death.
3. Water is also essential for breathing as the lungs need to be moist before they exchange oxygen and carbon dioxide. Apart from all those known functions, water is important for chemical reaction in digestion and metabolism. It also helps cool the body through perspiration and lubricates our joints. People suffering from arthritis should drink a glass of water every second hour.
4. In the last decade, the 8x8 guideline ( 8 ounce or 240 ml of water, or 8 glasses water) was followed all over the world. The Nation Institutes of Nutrition in its 2011 guidelines prescribed two litres or eight glasses of water per day for a healthy adult.

5. Optimum hydration can be achieved by drinking low-calorie, nutritious beverages such as lemon water, green tea, coconut water, bitter milk, besides plain water. Plan your day in a way that you drink enough liquid. The thumb ruled should be to include at least one of these beverages as part do not gulp all in one go, divide the number of glasses equally through the day and combine them with low-calorie, nutritious beverages whenever possible.
6. Regulate your water intake according to weather conditions for staying adequately hydrated.
7. To conclude, water is the elixir of life. Instead of wasting water, we must adopt rainwater harvesting. Think of states like Rajasthan where water supply is available for a few hours. At some places there is a great shortage of water. We must use water judiciously and sparingly. What will we leave for next generation if we use such a precious source carelessly? If things go like this, we all will be fighting over water. What we need is to treat even the sea water to meet water scarcity or else we will end up saying, "Water water everywhere but not a drop to drink."

(a) On the basis of your reading of the above passage make notes on it. using headings and sub-headings, Use recognisable abbreviations (wherever necessary –minimum 4) and a format you consider suitable. Also supply an appropriate title to it. [5]

(b) Write a summary of the passage in about 80 words. [3]

**2. Read the passage given below.**

**[12]**

1. A piano teacher described an interesting encounter she had with a young lady who came to inquire about music lessons. The young lady asked her, "How long will this course take? My father tells me that it is in fashion now to be able to play musical instruments and that I should learn one quickly. I want something that twill be quick, fast and easy like, like....." When the amused teacher explained that it would take a lifetime of meticulous practice to learn music, her face fell and, needless to say, she never came back.
2. The single most important factor that distinguishes those of us who succeed in any venture and those of us who don't is this 'instant coffee' attitude. Most of us want result quickly. We want to reach the top immediately and get worked up when things go wrong. Perseverance and patience are forgotten words. We get upset, frustrated and angry when a skill or activity requires us to put in a lot of effort and time. We get dejected and want to give it up.
3. But such thinking serves no good. For it doesn't solve the problem. Life is tough for those with the 'instant coffee' attitude.
4. Success, real success, and happiness come to those who have 'bread-making' attitude. Those who are willing to knead the dough, wait for hours for it to rise, only to punch it down and knead some more, wait for another couple of hours for it to rise again, then bake it before it is ready to be eaten. Nothing is instantaneous. For every endeavour-whether in the area of career, academics, music, sports, relationship, physical fitness, or even in spiritually – it is a long arduous journey.

5. Only if we are willing to put in the time, painstaking effort and have faith, can we get results. If we don't accept this difficulty –but true fact of life, our lives will be far from being happy and fulfilling. For we may not make that extra effort which can change the course of life dramatically, for the good.
6. The major problems with these 'instant coffee' solutions are that they are invariably shortlived. If we stubbornly refuse to give up this search for quick solution, all we do is end up on the wrong track.

**2.1 On the basis of your reading of the passage, answer the following questions by choosing the best of the given choices.** **[1x6=6]**

- (a) Why did the young lady wishing to learn piano not go back to her teacher?
- (i) Because the teacher was incompetent.
  - (ii) Because the young lady wanted to learn guitar.
  - (iii) Because the teacher told her that piano learning would take a lifetime of practice.
  - (iv) Because she did not have enough money.
- (b) What does instant coffee attitude consist of?
- (i) quick results
  - (ii) good taste
  - (iii) good aroma
  - (iv) enjoyment
- (c) ..... is an integral part of the 'instant coffee' attitude.
- (i) Patience
  - (ii) Perseverance
  - (iii) Impatience
  - (iv) Hard work
- (d) Bread-making attitude consists of .....
- (i) hard work and patience
  - (ii) intelligent planning
  - (iii) support from family
  - (iv) exceptional talent
- (e) Dramatically in paragraph 5 means .....
- (i) as in drama
  - (ii) suddenly and vastly
  - (iii) unrealistically
  - (iv) only visibility
- (f) Stubbornly in paragraph 6 is the opposite of .....
- (i) gradually
  - (ii) unknowingly
  - (iii) blindly
  - (iv) flexibly

**2.2 Answer the following.** **[1x4=4]**

- (a) Success, real success, and happiness come to those who have a ..... attitude.
- (b) We get upset, frustrated and angry when a .....or activity requires us to put in a lot of effort and time.
- (c) What are the problems of 'instant coffee' attitude?
- (d) What is the difference between 'instant coffee' attitude and 'bread-making' attitude?

**2.3 (a) Find the word which means the same as 'going on in spite of difficulties' (para 2 ).** **[1x2=2]**

- (b) Find the word which means the same as 'extremely careful' (para 1).

**Section - B (Writing and Grammar)** **[30]**

You are the secretary of Gymkhana Club, Coimbatore. Draft a notice for the members asking them to attend a meeting to discuss about the formation of the governing body members for the new year. (word limit - 50) **[4]**

**OR**

You are the General Manager of Coal India Limited New Delhi. Write an advertisement to be published in a newspaper for suitable accommodation on rent to be used as a Guest house for the company. (word limit - 50)

4. (a) You are Sandeep Kumar, Administrator , RK Academy. You have to place an order for a few

pieces of furniture required by the school. Write a letter to the Manager of Elite Furniture giving all the relevant details. Also ask for a discount on bulk purchase. (Word limit – 120-150) [6]

(b) You are Amit/ Amrita staying at Sunrise Apartments, Dover Road, Pune. The main road leading to this colony has there open manholes causing frequent accidents at night. The streetlights are also not working properly. Write a letter to the Editor of 'The Times of India' expressing your concern about the apathy of the authorities towards this situation. Also suggest ways to mobilise city dwellers, with the help of school children, for the cause for safe roads.  
[word limit – 120-150] [6]

5. You are a member of your School Quiz Team which won the CBSE Quiz contest at the National Level. Draft a report in 150-200 words, to be published in your school Magazine. You are Manav/Manvi. [8]

**OR**

The county today is going through a lot of turmoil which is disturbing you. Write out a motivational speech for the morning assembly to promote universal brotherhood, reminding the students about what the great leaders of our country had dreamt of (Word limit – 150-200 words)

6. In the passage given below one word has been omitted in each line. Write the missing word along with the word that comes before and after it. Underline the word supplied by you. [1/2x4=2]

		Before	Word	After
Mammals are vertebrates animals with	(a)	.....	.....	.....
backbones. They large brains and a	(b)	.....	.....	.....
keen awareness of surroundings.	(c)	.....	.....	.....
They are warm blooded and have	(d)	.....	.....	.....
their skin covered hair.				

7. Choose the best option to form a meaningful sentence. [1x2=2]

(i) He was so kind and generous that .....

P: he not only

Q: made other do so

R: but also

S: helped them himself

The proper sequence should be

(a) PSRQ

(b) SPQR

(c) PRSQ

(d) QPRS

(ii) If you need help .....

P: promptly and politely

Q: ask for attendants

R: to help our customers

S: who have instructions

The proper sequence should be

(a) SQPR

(b) QPSR

(c) QSRP

(d) SQRP

8. (a) Fill in the blanks with appropriate words: -

[1/2x2=1]

- (i) The boy takes ..... his father
- (ii) I was cautioned ..... believing rumours.

(b) Fill in the blanks with the appropriate form of the verb given in brackets:- [1/2x2=1]

- (i) When I .....(reach) the medical store, it ..... (close) already.

**Section - C - Literature**

[30]

9. Read the extract given below and answer the questions that follow:- [1x2=2]

Father and son, we both must live  
On the same globe and the same land,  
He speaks: I cannot understand  
Myself, why anger grows from grief  
We each put out an empty hand  
Longing for something to forgive

Answer the following : **(any 2)**

- (i) The poet's anger grows from grief when ..... though he cannot understand why.
  - (a) his son moves away from him
  - (b) his son speaks
  - (c) his son approaches him
- (ii) 'We' in line 5 refers to .....
- (iii) 'An empty hand in line 5 means that both father and son wish to forgive each other and start a new relationship, but they are unsuccessful. (True/False)

**OR**

When did my childhood go?  
Was it when I found my mind was really mine.  
To use whichever way I choose,  
Producing thoughts that were not those of other people  
But my own, and mine alone  
Was that the day!

Answer the following : **(any 2)**

- (i) The quality of being logical, analytical and seeking to find .....is indicated in these lines.
  - (a) answer to questions
  - (b) a suitable destination
  - (c) solace
- (ii) What is the thought that is troubling the poet?
  - (a) where has his childhood gone
  - (b) has his childhood phase come to an end
  - (c) does the essence of childhood still exists in this world.
- (iii) Name the poet of this poem.

**Pg- 5 of 6**

10. Answer the following in 30-40 words. **(any five)** [5x2=10]

- (i) What did the common people feel about having a melon as their king?
- (ii) "Shahid was legendary in his prowess in the kitchen". Write about this aspect of his personality with suitable examples.
- (iii) George, Doris and Cyril were all ungrateful. Cite relevant instances from the text to bring out the truth of this remark.
- (iv) Why was the narrator relieved on meeting Norbu?
- (v) What does Taplow feel about Mr. Crocker Harris?
- (vi) What do you mean by sustainable development?

11. "Religion was the dominant feature of her life". Comment on this statement in regard to Khuswant Singh's grandmother as projected in " The Portrait of a Lady". [word limit - 120-150 words) [6]

**OR**

Who was the untutored genius who created a paradise and what is his contribution to art?  
(Word limit - 120-150 words)

12. "Andrew had no premonition that , that night would influence his whole future in Blaenelly". State the significance of this remark. (Word limit - 120-150 words) [6]

**OR**

Why did Einstein consider his school and his quarters at Munich 'a hateful place'?  
(Word limit - 120-150 words)

13. What does the Laburnum Top symbolize? State the values learnt by you from the goldfinch. (Word limit 120-150 words). [6]

**OR**

Technology has been of great assistance in revealing certain aspects of Tut's life. Explain.  
(Word limit - 120-150 words)

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI

Time- 3 Hrs.

Subject:- Chemistry

M.M.- 70

## General Instructions:-

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

### **Question No. 1 to 5 are multiple choice questions: -**

1. What is the atomic mass of an element X for which a sample containing  $1.58 \times 10^{22}$  atoms weigh 1.05 gm? [1]  
(a) 28 gm                      (b) 20 gm                      (c) 40 gm                      (d) 23 gm
2. If uncertainty in the position of an electron is zero, the uncertainty in it's momentum would be [1]  
(a) zero                      (b)  $< \frac{h}{4\pi}$                       (c)  $> \frac{h}{4\pi}$                       (d) infinite
3. In which of the following pairs , the two species are isostructural [1]  
(a)  $\text{BrO}_3^-$  and  $\text{XeO}_3$                       (b)  $\text{SF}_4$  and  $\text{XeF}_4$                       (c)  $\text{SO}_3^{2-}$  and  $\text{NO}_3^-$                       (d)  $\text{BF}_3$  and  $\text{NF}_3$
4. The density of a gas A is thrice that of a gas B at the same temperature. The molecular weight of gas B is twice that of A. What is the ratio of the pressure acting to B and A? [1]  
(a)  $\frac{1}{4}$                       (b)  $\frac{7}{8}$                       (c)  $\frac{2}{5}$                       (d)  $\frac{1}{6}$
5. When sodium is dissolved in liquid ammonia a solution of deep blue colour is obtained. The colour of the solution is due to [1]  
(a) ammoniated electron                      (b) sodium ion  
(c) sodium amide                      (d) ammoniated sodium ion
6. Which law of chemical combination cannot be explained on the basis of Dalton's atomic theory? [1]
7. Name a dipositive metal ion with configuration  $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$ . [1]

8. Find the oxidation no. of each chlorine in  $\text{Ca}(\text{OCl})\text{Cl}$ . [1]
9. Identify the oxidant and reductant in the following reaction [1]  
 $2\text{K}_4[\text{Fe}(\text{CN})_6] + \text{H}_2\text{O}_2 \rightarrow 2\text{K}_3[\text{Fe}(\text{CN})_6] + 2\text{KOH}$
10. Arrange the following in increasing order of their solubility in water. [1]  
 $\text{Mg}(\text{OH})_2$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{Ba}(\text{OH})_2$ ,  $\text{Sr}(\text{OH})_2$
11. A and B belong to same group of periodic table. 'A' has higher atomic number than B, which will have lower ionisation enthalpy and why? [1]
12. Define enthalpy of neutralisation. [1]
13. How is  $\text{BeCl}_2$  prepared? Write its chemical reaction. [1]
14. Complete and balance the reaction : [1]  
 $\text{B}_2\text{H}_6 + \text{NH}_3 \xrightarrow{\Delta}$
15. Explain why  $[\text{SiF}_6]^{2-}$  is known but  $[\text{SiCl}_6]^{2-}$  is not? [1]
16. Which allotrope of carbon has zero value of standard enthalpy of formation and why? [1]
17. Which is expected to be more stable and why? [1]  
 $\text{O}_2\text{NCH}_2\text{CH}_2\text{O}^-$  or  $\text{CH}_3\text{CH}_2\text{O}^-$
18. Write the IUPAC name of [1]  
 $\text{H}_5\text{C}_2\text{OOC} - \text{CH}_2 - \text{CH}_2 - \text{COOC}_2\text{H}_5$
19. An alkene on ozonolysis gives a mixture of ethanal and pentan - 3 - one , write the structure of alkene. [1]
20. Draw Cis trans isomer of Hex - 3 ene. [1]

### Section - B

21. If  $3.01 \times 10^{20}$  molecules are removed from 98 mg of  $\text{H}_2\text{SO}_4$  then calculate the number of moles of  $\text{H}_2\text{SO}_4$  left? [2]
22. State Dalton's law of partial pressure. How is the law helpful in calculating the pressure of the gases , which are collected over water? [2]
23. Following equilibrium is set up when  $\text{SCN}^-$  ion is added to  $\text{Fe}^{3+}$  in aq solution. [2]  
 $\text{Fe}^{3+} + \text{SCN}^- \rightleftharpoons \text{Fe}(\text{SCN})^{2+}$   
 Pale Yellow    Colourless                      Deep red  
 When silver nitrate is added to the solution,  $\text{AgSCN}$  gets ppt. What will happen to the equilibrium . Explain.
24. Define solubility product. Write the expression for solubility product of calcium phosphate in terms of its solubility 's'. [2]
25. (a) Give one method of preparation of  $\text{H}_2\text{O}_2$   
 (b) What do you mean by hydride gap? [2]

OR

- (a) What is meant by demineralised water?  
(b) How can production of hydrogen from water gas be increased by using water gas shift reaction?

26. What are called free radicals? Draw the orbital structure of alkyl free radical. [2]  
27. With proper justification arrange the following in order of increasing stability. [2]  
 $\text{CH}_3\text{CH}_2^-$ ,  $\text{CH}\equiv\text{C}^-$ ,  $\text{CH}_2=\text{CH}^-$

OR

What is inductive effect? How the acidic strength of organic acid can be explained on the basis of this effect?

Section - C

28. Give reason for the following [3]  
(i) Halogens are good oxidizing agent.  
(ii) Nitrogen has positive electron gain enthalpy where as oxygen has negative.  
(iii) Anionic radius is always more than that of neutral atom.  
29. A spherical balloon of 21 cm diameter is to be filled with  $\text{H}_2$  at NTP from a cylinder containing the gas under 20 atmosphere and at  $27^\circ\text{C}$ . The cylinder can hold 2.82 litre of liquid. Calculate the number of balloons that can be filled up. [3]

OR

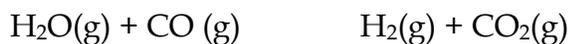
Pay load is defined as the difference between the mass of displaced air and the mass of balloon. A balloon of diameter 20 m, weight 100 kg. Calculate the pay load if it is filled with He at 1 atmosphere and  $27^\circ\text{C}$ .

Density of air is  $1.2\text{ kg/m}^3$ .

$R = 0.082\text{ lit atm k}^{-1}\text{mol}^{-1}$ .

30. (i) Arrange  $\text{HNO}_3$ ,  $\text{NO}$ ,  $\text{NH}_4\text{Cl}$  and  $\text{N}_2$  in decreasing order of oxidation state of nitrogen.  
(ii) Permanganate ion reacts with bromide ion in basic medium to give manganese dioxide and bromate ion. Write the balanced chemical equation for the reaction. [3]  
31. According to de Broglie, matter should exhibit dual behaviour, that is both particle and wave like properties. However a cricket ball of mass 100 gm does not move like a wave when it is thrown by a bowler at a speed of 100 km/hour. [ $h = 6.6 \times 10^{-34}\text{ JS}$ ]  
Calculate the wavelength of the ball and explain why it does not show wave nature. [3]  
32. Balance the following equation by ion electron method.  
(a)  $\text{N}_2\text{H}_4(l) + \text{ClO}_3^-(\text{aq}) \rightarrow \text{NO}(g) + \text{Cl}^-(\text{aq})$  (Basic medium)  
(b)  $\text{Cr}_2\text{O}_7^{2-} + \text{I}^- \rightarrow \text{Cr}^{3+} + \text{I}_2$  (acid medium) [3]

33. If 1 mole of H<sub>2</sub>O and 1 mole of CO are taken in a 10 litre vessel and heated to 725 K, at equilibrium point 40 percent of water (by mass) reacts with carbon monoxide according to equation



Calculate the equilibrium constant for the reaction. [3]

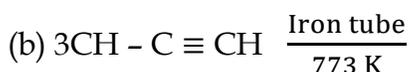
OR

The degree of ionisation of 0.1 M bromoacetic acid solution is 0.132. Calculate the pH of the solution and pK<sub>a</sub> of bromoacetic acid.

34. (i) Account for the order of acidity in the following [3]

Acetylene > Benzene > Hexane

(ii) Complete the following reaction



Section- D

35. (i) Write the resonating structure of N<sub>2</sub>O  
 (ii) Using VSEPR theory draw the shape of BrF<sub>5</sub>  
 (iii) Write the total number of Sp<sup>2</sup> hybridised orbital in Benzene molecule.  
 (iv) How does the bond length vary in dicarbon species? Calculate on the basis of bond order.



OR

- (a) In a polar solvent PCl<sub>5</sub> undergoes ionisation reaction as



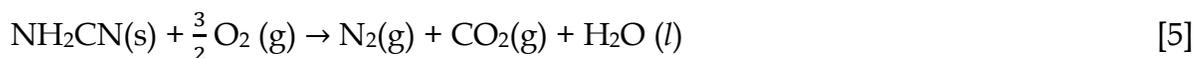
What are the geometrical shapes of the species involved in the equilibrium mixture.

- (b) On the basis of molecular orbital theory show that B<sub>2</sub> is paramagnetic while C<sub>2</sub> is not.

- (c) CO<sub>2</sub> and SO<sub>2</sub> both are triatomic molecules but there is a big difference in their dipole moment, why? [2+2+1=5]

36. (a) Define C<sub>p</sub> and C<sub>v</sub> and derive a relation between them.  
 (b) The reaction of Cyanamide NH<sub>2</sub>CN(S) with oxygen was carried out in a bomb calorimeter and ΔU was found to be -742.7 KJ/mol at 298 K

Calculate the enthalpy change for the reaction at 298 K.



OR

(a) Derive a relationship

$$\Delta G = - T \Delta S_{\text{total}}$$

(b) Calculate the free energy change on dissolving one mole (58.5 gm) of sodium chloride at 25°C. Lattice energy = 777.8 KJ/mol, hydration energy = - 774 KJ/mol of NaCl.

$$\Delta S \text{ at } 25^\circ\text{C} = 0.043 \text{ KJ mol}^{-1}\text{K}^{-1} .$$

37. (i) What is peroxide effect? Why it is applicable only in case of HBr and not in case of HCl or HI.

(ii) Convert the following

(a) Ethyne into propyne

(b) Benzene into p - Nitro toluene

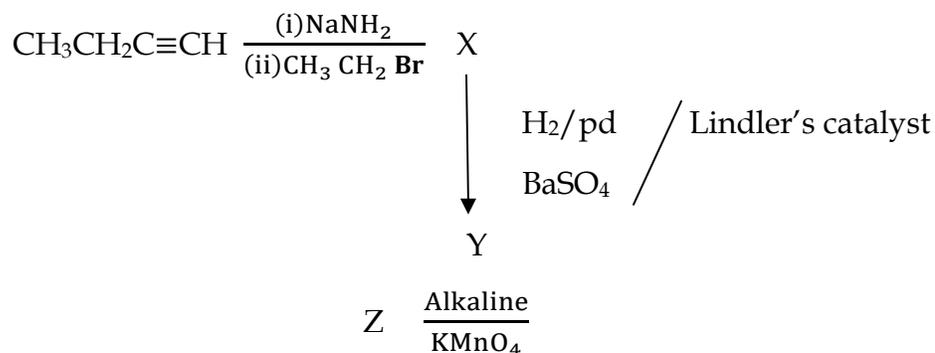
(c) Benzene into Benzophenone

[5]

OR

(i) Write the mechanism for the nitration of Benzene.

(ii) Identify X, Y, Z in the following sequence of reaction and write their structures.



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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI

Time- 3 Hrs.

Subject:- Mathematics

M.M.- 80

## General Instructions:-

1. All questions are compulsory.
2. This question paper contains 36 questions divided into 4 sections A, B, C and D.
3. Section A comprises of 20 questions of 1 mark each.
4. Section B comprises of 6 questions of 2 marks each.
5. Section C comprises of 6 questions of 4 marks each.
6. Section D comprises of 4 questions of 6 marks each.
7. There is no overall choice. However, internal choice has been provided in 2 questions of 1 mark each, 2 questions of 2 marks each, 2 questions of 4 marks each and 2 questions of 6 marks each. You have to attempt only one of the alternatives in all such questions.
8. Use of calculator is not permitted.

## Section - A

1. If sets A and B are defined as

$$A = \{(x,y) : y = \frac{1}{x}, x \neq 0 \in \mathbb{R}\}, B = \{(x,y) : y = -x, x \in \mathbb{R}\}, \text{ then}$$

- (a)  $A \cap B = A$                       (b)  $A \cap B = B$                       (c)  $A \cap B = \phi$                       (d)  $A \cup B = A$

2. If  $S = \{x : x \text{ is a positive multiple of 3 less than 100}\}$  and

$$P = \{x / x \text{ is a prime number less than 20}\} \text{ then } n(S) + n(P) \text{ is}$$

- (a) 34                                      (b) 31                                      (c) 33                                      (d) 41

3. If  $[x]^2 - 5[x] + 6 = 0$ , where  $[ ]$  denote the greatest integer function, then

- (a)  $X \in [3,4)$                       (b)  $x \in [2,3)$                       (c)  $x \in (2,3)$                       (d)  $x \in [2,4)$

4. Total number of words formed by 2 vowels and 3 consonants taken from 4 vowels and 5 consonants is equal to

- (a) 60                                      (b) 120                                      (c) 7200                                      (d) 720

5. The total number of terms in the expansion of  $(x+a)^{51} - (x-a)^{51}$  after simplification is

- (a) 102                                      (b) 25                                      (c) 26                                      (d) none of these

6. If  $x, 2y$  and  $3z$  are in AP, where the distinct numbers  $x, y$  and  $z$  are in GP, then common ratio of the GP is

- (a) 3                                      (b)  $1/3$                                       (c) 2                                      (d)  $1/2$

7. The value of  $(z+3)(\bar{z}+3)$  is equivalent to  
(a)  $|z+3|^2$                       (b)  $|z-3|$                       (c)  $z^2+3$                       (d) none of these

OR

Argument of complex number  $-1-i$  is

- (a)  $\pi/4$                       (b)  $3\pi/4$                       (c)  $-3\pi/4$                       (d)  $-\pi/4$
8. If  $\sin \theta + \operatorname{cosec} \theta = 2$ , then  $\sin^2 \theta + \operatorname{cosec}^2 \theta$  is equal to  
(a) 1                      (b) 4                      (c) 2                      (d) 3
9. The mean deviation of the data 2,9,9,3,6,9 and 4 from the mean is  
(a) 2.23                      (b) 2.57                      (c) 3.23                      (d) 3.57
10. A(1,1) and B(2,-3) are two points and D is a point on AB such that  $AD = 3 AB$ , B lies between A and D then the coordinate of D are:  
(a) (4,11)                      (b) (-4,11)                      (c) (-4,-11)                      (d) (4, -11)
11. Use quantifiers to convert the open sentence  $x + 3 = 8$  into a true statement.
12. Find the real value of a, for which  $3i^3 - 2ai^2 + (1-a)i + 5$  is real.
13. Find the equation of a line which cuts off an intercept of 3 units on the y-axis and is inclined at  $210^\circ$  to the x-axis.
14. Write the general solution of  $\sin(x + \frac{\pi}{12}) = 0$ .
15. If  $(2x, y-x) = (y+3, 0)$ , then find the value of y.

OR

Find the Range of the function  $f(x) = \frac{x}{x+2}$ .

16. Find the equation of the circle with centre  $(-a, -b)$  and radius  $\sqrt{a^2 - b^2}$ .
17. Find the length of the longest piece of a string that can be stretched straight in a rectangular room whose dimensions are 10, 13 and 8 units.
18. The Coefficient of variation of two distributions are 50% and 60%, and their arithmetic means are 30 and 25 respectively. Find the difference of their standard deviation.
19. If A and B are two mutually exclusive events of a random experiment and  $P(A \cup B) = 0.75$  and  $P(\bar{A}) = 0.6$ , then find  $P(B)$ .
20. Evaluate  $\lim_{x \rightarrow 0} \frac{(1+x)^n - 1}{x}$

**Section - B**

21. The water acidity in a pool is considered normal when the average pH reading of three daily measurements is between 8.2 and 8.5. If the first two pH readings are 8.48 and 8.35, find the range of pH value for the third reading that will result in the acidity level being normal.
22. By contrapositive, check the validity of the following statement.  
If  $a, b \in \mathbb{Z}$  such that  $ab$  is odd, then both  $a$  and  $b$  are odd.
23. Find  $\sin \frac{x}{2}$  and  $\cos \frac{x}{2}$ , if  $\tan x = -4/3$ , where  $x$  lies in 2<sup>nd</sup> quadrant.
24. Prove that the points  $(0, -1, -7)$ ,  $(2, 1, -9)$  and  $(6, 5, -13)$  are collinear. Find the ratio in which the first point divides the join of the other two.
25. A card is drawn from a deck of 52 cards. Find the probability of getting a king or a heart or a red card.

**OR**

Two students Anil and Ashima appeared in an examination. The probability that Anil will qualify the examination is 0.05 and that Ashima will qualify the examination is 0.10. The probability that atleast one of them qualify the examination is 0.13. Find the probability that only one of them will qualify the examination.

26. Differentiate  $f(x) = \frac{1}{x}$  with respect to  $x$  by first principle of derivatives.

**OR**

Find  $\frac{dy}{dx}$ , if  $y = \frac{3x+4}{5x^2-7x+9}$

**Section - C**

27. How many different numbers of 6- digit (without repetition of digit) can be formed from the digits, 3, 1, 7, 0, 9, 5 ?
- (i) How many of them will have 0 in the unit's place?
- (ii) How many of them are divisible by 5?
- (iii) How many of them are not divisible by 5?

**OR**

If  $P_r = 336$ ,  $C_r = 56$ , the find  $n$  and  $r$  and hence find  $C_{r-1}$

28. If  $a_1, a_2, a_3$  and  $a_4$  are the coefficients of any four consecutive terms in the expansion of  $(1+x)^n$ , prove that  $\frac{a_1}{(a_1+a_2)} + \frac{a_3}{(a_3+a_4)} = \frac{2a_2}{(a_2+a_3)}$
29. Using principle of mathematical induction, prove that  $(1 - \frac{1}{2^2})(1 - \frac{1}{3^2}) \dots \dots \dots (1 - \frac{1}{n^2}) = \frac{n+1}{2n}, \forall n \geq 2$ .

30. If  $\sin(\theta + \alpha) = a$  and  $\sin(\theta + \beta) = b$ , Prove that  $\cos 2(\alpha - \beta) - 4ab \cos(\alpha - \beta) = 1 - 2a^2 - 2b^2$ .

OR

Find the general solution of the equation  $\tan x + \tan 2x + \tan 3x = \tan x \tan 2x \tan 3x$

31.  $\lim_{x \rightarrow 0} \frac{1 - \cos x \sqrt{\cos 2x}}{x^2}$

32. A bag contains 3 red balls bearing one of the numbers 1, 2 and 3 (one number on one ball) and 2 black balls bearing the numbers 4 and 6. A ball is drawn, its number is noted and the ball is replaced in the bag. Then another ball is drawn and its number is noted. Find the probability of drawing:

- (i) 2 on the first draw and 6 on the second draw.
- (ii) number  $\leq 2$  on the first draw and 4 on the second draw.
- (iii) a total of 5

Section - D

33. Calculate mean, variance and standard deviation of the following distribution.

classes	1 - 10	11 - 20	21 - 30	31 - 40	41 - 50	51 - 60
Frequencies	11	29	18	4	5	3

OR

The mean and standard deviation of 20 observations are found to be 10 and 2 respectively. On rechecking, it was found that an observation 8 was incorrect. Calculate the correct mean and standard deviation if wrong observation 8 is replaced by 12.

34. A beam is supported at its ends by supports which are 12 metres apart. Since the load is connected at its centre, there is a deflection of 3 cm at the centre and deflected beam is in the shape of a parabola. How far from the centre is the deflection 1 cm?
35. A line  $4x + y = 1$  through the point A(2, -7) meets the line BC whose equation is  $3x - 4y + 1 = 0$  at the point B. Find the equation to the line AC so that  $AB = AC$ .
36. In an increasing G.P., the sum of the first and the last term is 66, the product of the second and the last but one is 128 and the sum of the terms is 126. How many terms are there in the progression?

OR

Show that  $\frac{1 \times 2^2 + 2 \times 3^2 + \dots + n \times (n+1)^2}{1^2 \times 2 + 2^2 \times 3 + \dots + n^2 \times (n+1)} = \frac{3n+5}{3n+1}$

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI

Time- 3 Hrs.

Subject:- Sociology

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, carry 1 mark each. 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. A term referring to the fact that the groups and societies of which are a part exert a conditioning influence on our behaviour is-----.
2. The study of human behavior in contexts of face to face interaction is-
  - a. Empirical investigation
  - b. Macro sociology
  - c. Micro sociology
  - d. Sample survey
3. It refers to the status which is allowed in succession or sequence at various stages of life-
  - a. Status set
  - b. Status sequence
  - c. Achieved status
  - d. Ascribed status
4. Correct the following statement----  
In Exogamy , marriage is within a specific caste, class or tribal group.
5. A society which lacks formal institutions of government is called –
  - a. Stateless society
  - b. State society
  - c. Authoritarian society
  - d. Laissez -faire
6. State True or False.  
Role conflict is the compatibility among roles corresponding to one or more status.
7. It is the application of one's culture in evaluating behavior and belief of people from other culture----
  - a. Tradition
  - b. Metropolitan culture
  - c. Ethnocentrism
  - d. Conformity

8. Comprehensive survey covering every single member of population is called-----.
9. A written list of questions to be asked in a survey or respondents in printed or written form is known as----- ?
10. The likelihood or odds of an event occurring in the statistical sense is
  - a. Randomisation
  - b. Reflexivity
  - c. Probability
  - d. Sampling
11. Doctrines or ways of thinking that focus on the Autonomous individual, rather than on the group----
  - a. Capitalism
  - b. Altruism
  - c. Individualism
  - d. Anomie
12. All those material advantages which improve the quality of life of the recipient are described as-----in Sociology.
13. Modes of fast city transport for large numbers is called-----
14. The term used to describe the conversion of a low class(urban) neighbourhood into a middle or upper class neighbourhood is-----
  - a. Gated communities
  - b. Migration
  - c. Gentrification
  - d. Mass transit
15. The release of particular gases creates a greenhouse effect by trapping the Sun's heat and not allowing it to dissipate. It leads to-----.
16. Waste material in fluid form produced from industrial processes-----
  - a. Effluents
  - b. Aquifers
  - c. Hydrology
  - d. Emissions
17. A period in the 18<sup>th</sup> century Europe when philosophers rejected the supremacy of religious doctrines established reason as the means of truth, is known as the period of----
  - a. Alienation
  - b. French Revolution
  - c. Solidarity
  - d. Enlightenment .
18. It was a mode of organization which was premised on the separation of the public from the domestic world-----?
19. A process by which one culture gradually absorbs another, the assimilated culture merges into the assimilating culture.
  - a. Domination
  - b. Merger
  - c. Assimilation
  - d. Covert cooperation
20. A French phrase that stands for a political and economic doctrine that advocates minimum state intervention in the economy and economic relations.

### SECTION - B

21. What is social control?

**OR**

What is role stereotyping?

22. What do you mean by the term Power?
23. Explain religion as a social institution.
24. What do you understand by 'Sanction'?

**OR**

- What is cultural Lag?
25. What is Research process?
  26. Give meaning to the term 'Social process'
  27. What is 'Conformity'?
  28. What is meant by 'De-forestation'?
  29. Define Anthropometry.

**OR**

What is Endogamy?

**SECTION ---C**

30. Mention the material issues that went into the making of Sociology.

**OR**

- Describe the growth of Sociology in India.
31. The main functions of Stratification.
  32. Describe the process of Socialisation.

**OR**

- Mention various agencies of socialization.
33. Discuss theory based on 'conflict perspective' about cooperation and conflict.
  34. What is the difference between 'Mechanical' and 'Organic' solidarity.
  35. Show with example, how moral codes are indicators of social solidarity.

**SECTION---D**

36. What are some of the important forms of pollution related environmental hazards? Explain.
37. Discuss main features of Indian culture . Explain how do they affect the change in society.

**OR**

- What are the features of caste as per comprehensive definition offered by G S Ghurye.
38. Read the following paragraph and answer the given questions.

We are used to thinking of sameness as boring and change as exciting; this is also true , of course - change can be really dull. But think of what life would be like if you are forced to change all the time.... What if you never, ever got the same food for lunch- everyday something different , and never the same thing twice, regardless of whether you liked it or not? Here is a scarier thought -what if every time you come back from school there were different people at home, different parents, different brothers and sisters....? What if whenever you played your favourite game - football, cricket, volleyball, hockey and so on - there the rules were different each time? Think of other areas of your life where you would like things to not change too quickly? Try to think about the reasons why you want or don't want change in particular instances.

- a. What is social order? (2)
- b. What are the different methods and measures to maintain social order? Discuss. (4)



# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI ANNUAL EXAMINATION (2019-2020)

Class:-XI  
Time- 3 Hrs.

Subject:- History  
M.M.- 80

### General Instructions:

- Answer all the questions. Some questions have internal choice. Marks are indicated against each question.
- Question number 1 to 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 23) should not exceed 100 words each.
- Answer to questions carrying 8 marks (Part-C Question 24 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 the early human being
  - i. The earliest fossils of Homo Erects have been found both Africa and Asia
  - ii. Hunting was the only method of obtaining food
  - iii. Around 4 lakhs years back they began to use controlled fire as suggested by hearths in caves.
  - iv. Tool making are confined to humansWhich of the above are true as far as the life style of early human being are considered?
  - a. i and ii
  - b. ii and iii
  - c. i and iii
  - d. i and iv[1]
2. What was Dressel 20 ? [1]
3. Name the two art forms promoted by Islam? [1]
4. Differentiate between clergy and monk [1]
5. Choose the correct option  
The monetary system of the late empire broke with the silver based currencies of the first centuries because
  - a) Gold was more valuable.
  - b) More silver mines were established and so Silver became too common
  - c) The Spanish silver mines were exhausted
  - d) Emperor Constantine believed that the use of Gold and silver was not Christian so he banned both[1]
6. The regime established by the Roman ruler Augustus was called the \_\_\_\_\_ [1]
7. Choose the correct option:  
Which were NOT a part of the Germanic tribes who attacked the Roman empire in the third century?
  - a. Alamanni
  - b. Sasanians
  - c. Franks
  - d. Goths[1]

8. Choose the correct option  
'History' in the Islamic empire was called as  
a. akhlaq                      b. tarikh                      c. tahqiq                      d. rihla                      [1]
9. Identify the poet of Persian origin who broke new ground by composing classical poetry on new themes such as wine and male love with the intentions of celebrating pleasures forbidden by Islam  
a. Ibn Sina                      b. Al Rushda                      c. Abu Nuwas                      d. Umar Khayyam                      [1]
10. What was the language of the sacred books of ancient Iran.?                      [1]
11. What is a *rubai* ?                      [1]
12. Find out from the following which one is NOT correctly matched                      [1]
- A. Byzantine                      : Roman  
B. Umayyads                      :Arabic  
C. Abbasids                      :Arabic  
D. Sasanian                      :Persian
13. Mention the reason why the nobility had a central role in feudal social processes.                      [1]
14. Give the meaning of the term '*Humanitas*'.                      [1]
15. Cite one reason for the big landowners to build canals.                      [1]
16. Consider the following languages                      [1]
1. Akkadian  
2. Sumerian  
3. Persian  
4. Aramic
- The correct chronological order of the coming of these languages is:
- a. 1,2,4,3                      b. 2,1,4,3                      c. 1,4,2,3                      d. 2,4,3,1
17. Indicate which of the following is NOT correct.                      [1]
- Italians towns and courts were linked with the world beyond by  
a. Trade                      b. Travel                      c. Military conquest                      d. Education
18. Consider the following statement regarding inventions during the industrialization period.  
I. Education in basic sciences like physics or chemistry was extremely limited  
II. Many inventors were not educated in science  
III .The scientific journals and scientific societies were the only reason for many inventions  
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) :During the first phase of industrialization the population of cities of England increased  
Reason (R): There was an increase in the number of children born to families who already lived in the cities.
- Both A and R are true and R is the correct explanation of A
  - Both A and R are true but R is not the correct explanation of A.
  - A is true but R is false
  - A is false but R is true
20. Identify the following image and write its name. [1]



**PART-B**

- Discuss the meaning of Sama in detail . [3]
- Why did Europe's economic expansion slowed down in the early fourteenth century? [3]
- Differentiate between Australopithecus and Homo . [3]

**PART-C**

- What do you know about the crusades ? give a brief history of the crusades . [8]
- Discuss the main features of urban life in the Roman empire . [8]
- What do you mean by vassalage system? Throw light on importance in feudalistic society. [8]
- Throw light on the salient features of humanist thoughts [8]

**PART -D**

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

“If my dear lord is slain, his fate I'll share ,

If he is hanged ,then hang me by his side .

If to the stake he goes ,with him I'll burn.

And if he is drowned ,then let me drown with him”

- Which system present in medieval European society has been highlighted in the given composition? [1]
- What do mean by knight ? To whom was a knight particularly loyal? [2]
- Throw light on the main duties of a knight in context with the above given composition [2]

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

' The famine prevalent for many successive years in many provinces has clearly displayed for men of any understanding the effect of malnutrition in generating illness .The city-dwellers ,as it was their custom to collect and store enough grain for the whole of the next year immediately after the harvest ,carried of all the wheat ,barley, beans and lentils, and left to the peasants various kind of pulse –after taking quite a large proportion of theirs to the city .After consuming what was left in the course of the winter ,the country people had to resort to unhealthy foods in the spring ; they ate twigs and shoots of trees and bushes and bulbs and roots of incredible plants ...'

(i) Why did the people in country sides in Roman empire fell prey to so many diseases? [2]

(ii) What was the main cause of malnutrition in villages? [3]

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

Balthasar Castiglione ,author and diplomat ,wrote in his book The Courtier(1528)

'I hold that a woman should in no way resemble a man as regards her ways ,manners ,words ,gestures and bearing .Thus just as it is very fitting that a man should display a certain robust and sturdy manliness ,so it is well for a woman to have a certain soft and delicate tenderness ,with an air of feminine sweetness in her every movement ,which, in her appear a woman ,without any resemblance to a man .If this percept be added to the rules that these gentlemen have taught the courtier, then I think that she ought to be able to make use of many of them , and adorn herself with the finest accomplishments...For I consider that many virtues of the mind are as necessary to a woman as to a man as it is to of good family ;to shun affectation ;to be naturally graceful: to be well mannered ,clever and prudent ;to be neither proud ,envious or evil-tongued ,nor vain...to perform well and gracefully the sports suitable for women.'

(i) Which are the main virtues of a good woman according to Balthasar Castiglione? [1]

(ii) For Balthasar which virtues of mind were necessary for woman ? [2]

(iii) What was the position of woman in the Renaissance society ? [2]

**PART-E**

31.1 On the given political outline map of the world identify the following locations and label the following with appropriate symbols

a. Two important Towns of Italy which were important centers of renaissance [1+1=2]

b. The place from which the fossil of Australopithecus was found [1]

c. The place where Industrial revolution started [1]



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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI

Time- 3 Hrs.

Subject:- Economics

M.M.- 80

## General Instructions:

- All the questions in both the sections are compulsory.
- Q.No. 01 - 10 and 18-27 are multiple choice or should answer in one sentence, carrying 1 mark each.
- Q.No. 11,12 and 28, 29 are short answer questions carrying 3 marks each. Answer to them should normally not exceed 60 words each.
- Q.No. 13 - 15 and 30- 32 are also short answer questions, carrying 4 marks each. Answer to them should normally not exceed 70 words each.
- Q.No. 16, 17 and 33 to 34 are long answer questions carrying 6 marks each. Answer to them should normally not exceed 100 words each.
- Answers should be brief and to the point.
- The above word limits should be adhered as far as possible.
- There is no word limit for numerical problems.

## SECTION - A

1. Mention the necessary and sufficient conditions of consumer's equilibrium under indifference curve approach. [1]
2. The price of tomatoes increases and people buy tomato puree. You infer that tomato price and tomatoes are :  
(a) Normal Good; (b) Complements; (c) Substitutes;(d) inferior goods [1]
3. Is it true that law of demand explains quantitative relationship between price and quantity demanded. [1]
4. Define marginal product. [1]

**OR**

Define marginal revenue.

5. If the total cost curve is parallel to the x-axis, then the marginal cost will:  
(b) Increase (b) Decrease (c) Zero (d) none of these [1]
6. A straight line supply curve touches the x-axis, what can you say about its price elasticity? [1]
7. Define the meaning of cost in economics. [1]
8. The price discrimination is one of the feature of: [1]  
(a) monopolistic competition (b) monopoly  
(c) perfect competition (d) oligopoly
9. What is collusive oligopoly? [1]

10. Why is AR curve of a firm under perfect competition parallel to x-axis and negatively sloped under monopoly? [1]

11. Explain how is the shape of supply curve changes with the time period. Use diagrams. [3]

**OR**

The price of a commodity is Rs 10 per unit and the total revenue from it is Rs 1000. Its price elasticity of supply is 0.8. Its price falls by 10%. Calculate total revenue at the reduced price.

12. "Monopolistic market shares the features of two other market forms". Mention these markets and also explain those particular features. [3]

13. Explain the 2<sup>nd</sup> phase of law of variable proportion. Draw the necessary diagram. Also mention any two reasons. [4]

14. The firm's average fixed cost when it produces two units is 30. It's average total cost schedule is given below. Calculate its marginal cost and average variable cost at each level of output. [4]

Level of Output	1	2	3
ATC	80	48	40

15. China is a big manufacturer of mobile phones. Suppose it exports a large number of mobile phone to India. How will it affect the equilibrium price and quantity of mobile phone in India.

**OR**

Explain the effect of increase in Income of the buyers of a normal good on its equilibrium price and quantity. [4]

16. (a) Explain the difference between increase in demand and expansion of demand. Also give the necessary diagrams.

(b) Explain the two factors which affect only the market demand of a commodity. [3+3=6]

**OR**

How does a consumer attain equilibrium in case of two commodities under cardinal approach. Also explain what will the consumer do in case of disequilibrium.

17. Explain the relationship between AFC, AVC and AC with the help of a suitable diagram. [6]

**SECTION - B**

18. Index number serves as a \_\_\_\_\_ for measuring the value of money. [1]

(a) Parameter (b) Barometer (c) Both (a) and (b) (d) None of these

19. What do you mean by partial correlation? [1]

20. The median of a series is 12. Two additional observations 5 and 25 are added to the series. What will be the median of the new series? Give the reason. [1]
21. If the correlation between X and Y is 0.58 then what will be the correlation coefficient between  $U = 2X+3$  and  $V = Y - 3$ ? Give the reason. [1]
22. Which diagram will be suitable for showing the number of students of three different years of four different standards of your school: [1]
- (a) subdivided bar diagram                      (b) multiple bar diagram  
(c) simple bar diagram                              (d) none of the above
23. Class frequencies of a series can be known by: [1]
- (a) Frequency polygon                      (b) Ogive                      (c) Histogram                      (d) Both (a) and (b)
24. When equal weights are given to all the observations of data then [1]
- (a)  $\bar{X}_W > \bar{X}$ ;                      (b)  $\bar{X}_W < \bar{X}$ ;                      (c)  $\bar{X}_W = \bar{X}$ ;                      (d) None of these
25. Which average would be most suitable to know the average size of readymade garments? [1]
- (a) mean                      (b) median                      (c) mode                      (d) none of the above
26. Define dispersion. [1]

**OR**

Define correlation.

27. Consistency of a given data is decided by: [1]
- (a) negative dispersion value                      (b) high dispersion value  
(c) zero value of dispersion                      (d) low dispersion value
28. What are the considerations underlying the choice of base period in the construction of index number? [3]

**OR**

Explain any three uses of consumer price index number.

29. The number of workers in a small factory in 2014 was 540, of which 30% were female and the rest males.

In 2016 the strength of the workers increased by 100 females and 200 males.

In 2018 the total number of workers increased by 25% over its value in 2016.

The female workers were 340. Tabulate the above information.

[3]

30. Find out Karl Pearson's coefficient of correlation between two variables by using actual mean method on the basis of following information: [4]

X	21	22	23	24	25	26	27
Y	16	15	17	18	19	20	21

**OR**

Calculate coefficient of correlation from the following data by Rank Correlation method

X	20	11	24	18	20	22
Y	24	9	20	22	9	21

31. Given the following data:

Items	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	1	10	2	5
B	1	5	X	2

Find X, if the ratio between Laspeyre's and Paasche's index number is 28.27. [4]

32. Calculate median deviation from the following data. [4]

Mid point	10	30	50	70	90
Frequency	10	16	30	32	12

33. (a) Mention any two mathematical properties of Arithmetic mean. [2+4=6]  
 (b) Calculate Arithmetic mean by step deviation method from the following data.

Daily income (more than)	75	85	95	105	115	125	135	145
No. of Families	150	140	115	95	70	60	40	25

34. Make a Lorenz curve of the following data and show inequality in incomes in two different factories.

Wages		10	12	14	16	20	28
No. of Workers	Factory A	60	80	120	90	100	50
	Factory B	150	100	90	110	30	20

**OR**

[6]

For a group of 50 male workers the mean and standard deviation of their weekly wages are Rs 63 and Rs 9 respectively. For a group of 40 females these are Rs 54 and Rs 6 respectively. Find mean and standard deviation for the combined group of 90 workers.

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2019-20)

Class:-XI

Time- 3 Hrs.

Subject:-Engineering Graphics

M.M.- 70

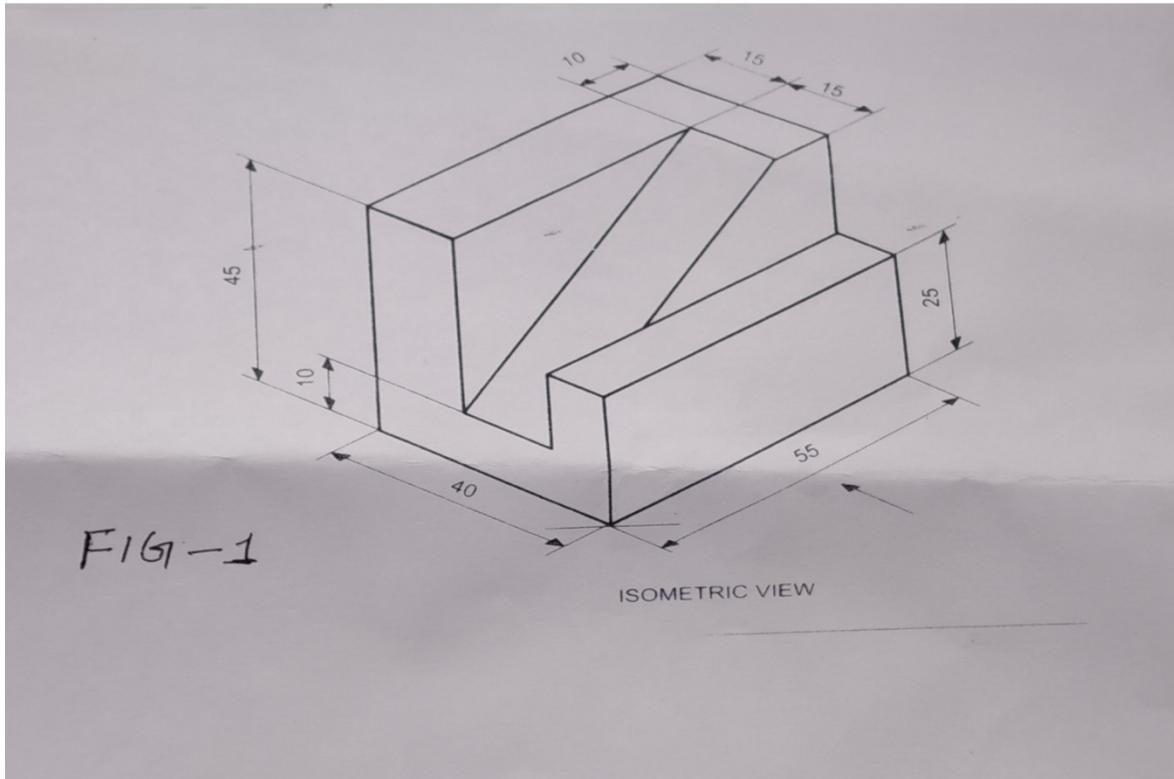
## General Instructions: -

Attempt all the questions. All dimensions are in millimeters. Use both side of drawing sheet if necessary. Missing and mismatching dimensions, if any may be suitable assumed .  
Follow SP: 46 - 2003 reversed code (with first angle method of Projections)

1. Multiple choice questions: [1x5=5]
  - (i) Which scale is used for drawing isometric projection?  
(a) Full – size scale                      (b) Vernier scale                      (c) enlarged scale                      (d) isometric scale
  - (ii) The isometric circle is similar to –  
(a) curve                      (b) an ellipse                      (c) a chord                      (d) a cycloid
  - (iii) A circle is the isometric projection of –  
(a) a hemisphere                      (b) a cone                      (c) a chord                      (d) none of these
  - (iv) What will be the shape of a circle in isometric projection?  
(a) ellipse                      (b) parabola                      (c) circle                      (d) none of these
  - (v) A solid without any edge or vertex , when visualized from any direction appears as a circle is –  
(a) sphere                      (b) cone                      (c) cylinder                      (d) prism
2. A point 'C' is in the V.P. and 40 mm above the H.P. Draw the projections. Give the dimensions. [3]
3. Line AB is 50 mm long. Perpendicular to the V.P. , 25 mm above the H.P. and it's one end in the V.P. Draw the projection. Give the dimensions. [3]
4. Construct an isometric scale. [4]
5. Draw the isometric projections of Pentagonal plane of 30 mm sides. Side parallel to V.P. It is in vertical position. [7]
6. Draw the isometric projections of hexagonal prism of base side 30 mm, height 60 mm, base side parallel to V.P. it is resting on the ground of it's base. Axis perpendicular to the H.P. Give all the dimensions. [8]
7. Draw regular hexagon in a circle of 30 mm sides. Give the dimensions. [6]
8. A hexagonal pyramid, base 25 mm side and axis 50 mm long, has an edge of it's base on the ground. It's axis inclined at 30° to the ground and parallel to the V.P. Draw the projections. Give the dimensions. [12]
9. A cylinder of 40 mm diameter, height 60 mm. Axis is vertical. It is resting on the ground of it's base. It is cut by a section plane, perpendicular to the V.P. , inclined at 45° to the H.P. and intersecting the axis 32 mm above the base. Draw its front view and sectional top view. Give the dimensions. [10]

10. In Fig- 1, Draw its front view, top view and side view. Give the dimensions.

[12]



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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI  
ANNUAL EXAMINATION (2019-20)

Class:-XI  
Time- 3 Hrs.

Subject:-Biology  
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.

## SECTION-A

1. The steroid responsible for balance of water and electrolytes in our body is  
a. Insulin                      b. Aldosterone                      c. Testosterone                      d. Melatonin

OR

One of the following conditions is not linked to deficiency of thyroid hormones

- a. cretinism                      b. goiter                      c. myxedema                      d. exophthalmos
2. The label of a herbarium sheet does not carry information on  
a. date of collection                      b. name of the collector  
c. local names                      d. height of the plant

OR

The common characteristics between tomato and potato will be maximum at the level of their

- a. family                      b. order                      c. division                      d. genus
3. The term 'glucocalyx' is used for  
a. a layer between cell wall and membrane of mitochondria  
b. cell wall of bacteria  
c. a layer surrounding the cell wall of bacteria  
d. bacterial plasma membrane
4. In which of the following forms is iron absorbed by plants?  
a. Ferric                      b. Ferrous                      c. Free element                      d. Both ferric and ferrous
5. Smooth muscles are  
a. voluntary, multinucleate, cylindrical                      b. involuntary, cylindrical, striated  
c. involuntary, fusiform, uninucleate                      d. voluntary, spindle shaped, uninucleate

## SECTION-B

6. What do the terms Phycobiont and Mycobiont signify? Why is its symbiotic association referred to as pollution indicators?

**OR**

What is heterospory? Briefly comment on its significance.

7. Draw a labeled diagram of a section of an alveolus with a pulmonary capillary.
8. What is the difference between an adenosine and adenylic acid? Give their structure.
9. When dry seeds are kept in water, they swell up:
- Name and define the phenomenon responsible for it.
  - What are the conditions essential for this phenomenon to occur.
10. Where are auxins generally produced in a plant? Name any one naturally occurring plant auxin and any one synthetic auxin.
11. Answer briefly
- How does bile juice help in digestion of fats?
  - What leads to the activation of inactive pepsinogen?
12. Differentiate between springwood and autumn wood.

## SECTION-C

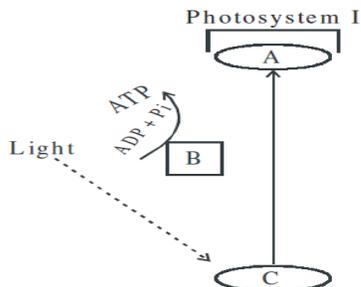
13. Draw the cell cycle marking the different stages. Describe the events that occur during the three sub stages of interphase.
14. Double fertilization and triple fusion is the unique feature of angiosperms only. Justify your statement with suitable description.

**OR**

Give three major differences between chordates and non-chordates.

15. a. Differentiate between apocarpous and syncarpous ovary?  
b. What is a parthenocarpic fruit?  
c. What are pneumatophores?
16. Describe the structure of cilia with the help of a labeled diagram.
17. Explain the sliding filament theory of the mechanism of muscle contraction.
18. Differentiate between differentiation, dedifferentiation and redifferentiation using suitable examples.
19. Illustrate the differences between the mechanism of action of a protein and steroid hormones. Give a diagrammatic representation of the mechanism of action of estrogen hormone.

20. a. In the diagram shown below label A, B and C. What type of photophosphorylation is possible in this?



- b. Give any one point of difference between cyclic and non-cyclic photophosphorylation.
21. Classify the plastids on the basis of the types of pigments found in them. State the function of each type.

### SECTION-D

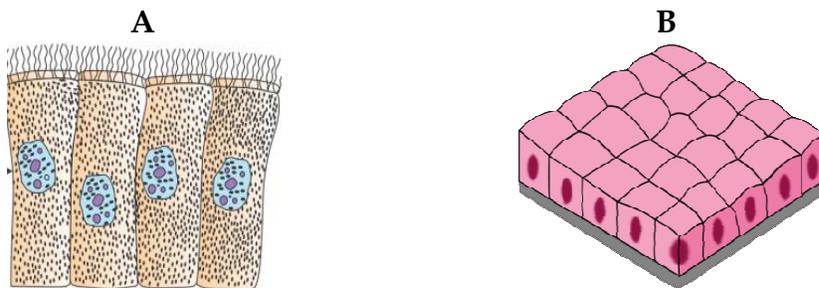
22. Plants obtain nitrogen from the soil. Different organisms convert the atmospheric nitrogen into simple absorbable forms for the plant uptake. Describe the process of nitrification along with the equations and the organisms involved.

**OR**

Identify the micronutrient of plant which helps in splitting of water to liberate oxygen during photosynthesis. How does the excess of this nutrient induce the deficiency of other nutrients in plants?

23. Explain the mechanism of generation of nerve impulse and its conduction along an axon.

24.



- a. Identify A and B  
b. Write the location of each of these tissues. Also mention their functions.

### SECTION-E

25. What are the various stages of meiotic prophase-I? Enumerate the chromosomal events during each stage?

**OR**

- a. Illustrate the different nature of bonds linking monomers to make polymers in case of polysaccharides and proteins.  
b. Describe the steps of catalytic cycle of an enzyme till the formation of product.  
c. How is trihydroxy propane commonly called? Write its structural formula.

26. What is glycolysis? Where does glycolysis take place in a cell? Give schematic representation of glycolysis.

**OR**

- a. What special anatomical features are displayed by leaves of *Zea mays* (maize)? (Any two)
- b. Describe C<sub>4</sub> pathway in a paddy plant.
- c. How is this pathway an adaptive advantage to the plant?

- 27.
- a. What is cardiac cycle? Describe the events that occur during it.
  - b. Why do we call our heart myogenic?
  - c. What do the P-wave and T-wave represent in the ECG?

**OR**

- a. Explain in detail the mechanism of urine formation in the nephron.
- b. Explain the role of JGA in the regulation of kidney function.

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