



# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- English**  
**M.M.- 80**

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### **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.*
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### **Section-A Reading**

[20 marks]

1. Read the passage given below carefully and answer the questions that follow.
  1. No student of a foreign language needs to be told that grammar is complex. By hanging word sequences and by adding a range of auxiliary verbs and suffixes, we are able to communicate tiny variations in meaning. We can turn a statement into a question, state whether an action has taken place or is soon to take place, and perform many other word tricks to convey subtle differences in meaning. Nor is this complexity inherent to the English Language. All languages, even those of so-called 'primitive' tribes have clever grammatical components. The Cherokee pronoun system, for example, can distinguish between 'you and I', 'several other people and I' and 'you, another person and I' In English, all these meanings are summed up in the one, crude pronoun 'we'. Grammar is universal and plays a part in every language, no matter how widespread it is. So the question which has baffled many linguists is –who created grammar?
  2. At first, it would appear that this question is impossible to answer. To find out how grammar is created, someone needs to be present at the time of a language's creation, documenting its emergence. Many historical linguists are able to trace modern complex languages back to earlier languages, but in order to answer the question of how complex languages are actually formed, the researcher needs to observe how languages are started from scratch. Amazingly, however, this is possible.
  3. Some of the most recent languages evolved due to the Atlantic slave trade. At that time slaves from a number of different ethnicities were forced to work together under coloniser's rule. Since they had no opportunity to learn each others languages, they developed a make-shift language called a Pidgin. Pidgins are strings of words copied from the language of the landowner. They have little in the way of grammar, and in many cases it is difficult for a listener to deduce when an event happened, and who did what to

whom. Speakers need to use circumlocution in order to make their meaning understood. Interestingly, however, all it takes for a Pidgin to become a complex language is for a group of children to be exposed to it at the time when they learn their mother tongue. Slave children did not simply copy the strings of words uttered by their elders, they adapted their words to create a new, expressive language. Complex grammar systems which emerge from Pidgins are termed Creoles, and they are invented by children.

4. Further evidence of this can be seen in studying sign languages for the deaf. Sign languages are not simply a series of gestures; they utilise the same grammatical machinery that is found in spoken languages. Moreover, there are many different languages used worldwide. The creation of one such language was documented quite recently in Nicaragua. Previously, all deaf people were isolated from each other, but in 1979 a new government introduced schools for the deaf. Although children were taught speech and lip reading in the classroom, in the playgrounds they began to invent their own sign system, using the gestures that they used at home. It was basically a Pidgin. Each child used the signs differently, and there was no consistent grammar.

However, children who joined the school later, when this inventive sign system was already around, developed a quite different sign language. Although it was based on the signs of the older children, the younger children's language was more fluid and compact, and it utilized a large range of grammatical devices to clarify meaning. What is more, all the children used the signs in the same way. A new creole was born.

5. Some linguists believe that many of the world's most established languages were Creoles at first. The English past tense-ed ending may have evolved from the verb 'do'. 'It ended' may once have been 'It end-did'. Therefore it would appear that even the most widespread languages were partly created by children. Children appear to have innate grammatical machinery in their brains, which springs to life when they are first trying to make sense of the world around them. Their minds can serve to create logical, complex structures, even when there is no grammar present for them to copy.

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

(a) In paragraph 1, why does the writer include information about the Cherokee language?

- (i) To show how simple, traditional cultures can have complicated grammar structures.
- (ii) To show how English grammar differs from Cherokee grammar.
- (iii) To prove that complex grammar structures were invented by the Cherokees.
- (iv) To demonstrate how difficult it is to learn the Cherokee language.

- (b) What can be inferred about the slave's Pidgin language?
- (i) It contained complex grammar and vocabulary.
  - (ii) It was based on many different languages.
  - (iii) It was difficult to understand, even among slaves.
  - (iv) It was created by the landowners and artists.
- (c) All the following sentences about Nicaraguan sign language are true except:-
- (i) The language has been created since 1979.
  - (ii) The language is based on speech and lip reading.
  - (iii) The language incorporates signs which children used at home.
  - (iv) The language was perfected by younger children.
- (d) Which idea is presented in the final paragraph?
- (i) English was probably once a creole.
  - (ii) The English past tense system is inaccurate.
  - (iii) Linguists have proven that English was created by children.
  - (iv) Children say English past tenses differently from adults.
- (e) Some linguists believe that many of the world's most established languages were:
- (i) English and Japanese at first
  - (ii) English and Creoles at first
  - (iii) Creoles only at first
  - (iv) German and Creoles at first.

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

- (a) What is common to all languages?
- (b) According to the passage what can be attributed as a consequence of the Atlantic slave trade?
- (c) What is Pidgin?
- (d) What are Creoles?
- (e) How can we find out who created grammar?

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

- (a) simple and temporary (para 3)
- (b) Uniform (para 4)

2. Read the passage given below carefully and answer the questions that follow.

1. Although stupidity is commonly defined as 'a lack of normal intelligence', stupid behaviour is not the behaviour of a person lacking in Intelligence but the behaviour of a person not using good judgment or sense. In fact, stupidity comes from the Latin word

that means 'senseless'. Therefore, stupidity can be defined as the behaviour a person of normal intelligence who acts in a particular situation as if he or she isn't very bright. Stupidity exists at three level of seriousness.

2. First is the simple, relatively harmless level. Behaviour at this level is often amusing. It is humorous when someone places the food from a fast food restaurant on the roof of the car while unlocking the door and then drives away with the food still on the roof. We call this absent-mindedness. The person's good sense or intelligence was temporarily absent. At this level, other than passing inconvenience or embarrassment, no one is injured by the stupid behaviour.
3. The next type, serious stupidity, is more dangerous. Practical jokes such as putting sugar in the salt shakers are at this level. The intention is humorous, but there is a chance of harm. Irresponsible advice given to others is also serious stupidity. An example is of the person who plays a psychiatrist on the basis of an introductory psychology course or doing a TV program on psychiatry. The intention may be to help, but if the victim really needs psychiatric help, an amateur will only worsen the situation.
4. Even worse is the third kind of stupidity. Kind people, who would never injure another living being, stupidly throw away a box of six-week-old kittens along a country road. Lacking the heart to kill the poor things, they sentence them to almost certain death from wild animals, infectious exposure or the wheels of a passing vehicle. Yet they are able to tell themselves that 'they will find nice homes' or animals can get along in the wild'. Another example of this kind of stupidity is the successful local businessman who tries to have as many office affairs as he can get away with. He risks the loss of his business and his home. He fails to see that what he is doing is wrong. It is the true moral stupidity of a person not willing to think about the results of his actions or take responsibility for them. The common defense of a person guilty of stupidity is – 'But I didn't think..... ' This however , is not a proper –excuse, especially when serious or harmful stupidity is involved.

2.1 On the basis of your understanding of the passage, make notes on it using headings and sub-headings.

(a) Use recognizable abbreviations wherever necessary-minimum four and a format you consider suitable. Also supply an appropriate title to it. [4]

(b) Write a summary of the passage in about (80-100) words. [4]

**Section-B (Writing Skills)**

[30 marks]

3. You are secretary of the Residents Welfare Association, GH-28, Mansa Devi Complex, Panchkula. Write a notice to be circulated to the members of the association, requesting them to attend a meeting to discuss the parking of vehicles of the residents in the complex. [4]

**OR**

You want to sell your car as you are going abroad. Draft a suitable advertisement in not more than 50 words to be published in the classified columns of 'The Hindu'. Give necessary details of the car. You are Suman/Sushil of 21 Ram Nagar, Delhi.

4. Lack of job opportunities in the rural areas is forcing people to migrate to cities. Every big city thus has a member of slums in it. Life in these slums is miserable. Write a letter in 120-150 words to the Editor of a national newspaper on how we can improve the living conditions in these slums. You are Aditi/Aditya of F112, Mall Road, new Delhi. [6]

**OR**

You are Anand/Arti of 14, Modal Town, Delhi. You have seen an advertisement in 'The Hindu' for the post of Chief Chef in a five Star Hotel. Apply for the job with complete bio-data . Write in 150-160 words.

5. You are Riya / Ritesh. You are concerned about the fact that the media today is giving a lot of coverage to frivolous news and not highlighting political, social and national issues. Write an article in about 150-200 words for publication in your school magazine on 'Dumbing down of the media'. [10]

**OR**

You are Shikha / Rishabh. Write an article for publication in a local monthly magazine on "Importance of Time Management". (150- 200 words)

6. Historical society of Kendriya Vidyalaya, Krishna Nagar sent a group of students to visit a place of historical interest. You, Anant / Anita were its leader. Write a report in 150-200 words for the school newsletter on the tour, describing the place, its history, how you reached there and all that you have learnt. [10]

**OR**

You are Vineeta / Vineet of Kunwar's International School, Lucknow. Recently your school organized a cultural show as a part of a cultural exchange programme. Write a report in 150-200 words for your school magazine.

**Section- C [Literature Textbooks and Long Reading Text]** [30 marks]

7. Read the extracts given below and answer the questions that follow:

7.1 " With ships and sun and love tempting them to steal....."

For lives that slyly turn in their cramped holes from fog to endless night?" [1x4=4]

- (a) Who are 'them' referred to in the first line?  
(b) What tempts them?  
(c) What does the poet say about 'their' lives?  
(d) What do you understand by 'from fog to endless night'?"

7.2 'My last French Lesson! Why I hardly knew how to write! I should never learn more!

I must stop there, then!'

[1x4=4]

(a) Who was repentant that it was the last French Lesson?

(b) Why was the person feeling guilty?

(c) Who was his French teacher imparting the last French Lesson?

(d) Was the French teacher also to be blamed for the person not learning French. Answer in not more than two sentences.

8. Answer any **five** of the following questions in about 30-40 words each.

[2x5=10]

(i) 'From that day onwards it was celebration time for all the tigers inhabiting Pratibandapuram'. Bring out the irony in this statement.

(ii) What happened when Charley went to the Grand Central Station with the old-style currency bills?

(iii) Why does the author call her two -week stay in Antarctica 'a chilling prospect'?

(iv) What is the theme of the poem 'An Elementary school classroom in a slum'?

(v) Why is Saheb not happy working at the tea stall?

(vi) How is 'Shakespeare wicked and the map a bad example' for the children of the school in the slum?

(vii) What is the kind of pain and ache that the poet feels in 'My Mother at sixty-six'?

9. Answer **one** question in about 120-150 words.

[6]

9.1 Roosevelt said, "All we have to fear is fear itself." Do you agree? Why/why not? Explain.

9.2 Most of us do not raise our voice against injustice in our society and tend to remain mute spectators. Anees Jung in her story, 'Lost Spring' vividly highlights the miserable life of street children and bangle makers of Firozabad. She wants us to act. Which qualities does she want the children of the lesson 'Lost Spring' to develop?

10. Answer **one** question only in about 120-150 words.

[6]

10.1 Even today so many among us believe in superstitions. An astrologer predicted about 'The Tiger King' that he would be killed by a tiger. He 'killed' one hundred tigers yet was himself 'killed' by a tiger. How did the superstitious belief 'prevail'?

10.2 What explains the attitude of the General in the matter of the enemy soldier? Was it human consideration, lack of national loyalty, dereliction of duty or simply self-absorption.

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**DELHI PUBLIC SCHOOL**  
**SAIL TOWNSHIP, RANCHI**  
**QUALIFYING EXAMINATION (2019-20)**

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- Mathematics**  
**M.M.- 100**

**General Instructions:-**

1. All questions are compulsory.
2. Write question number before attempting questions.
3. The question paper consists of 36 questions divided into four sections A,B,C and D.
4. Section A comprises 20 questions of 1 mark each.  
Section B comprises 06 questions of 2 marks each.  
Section C comprises 06 questions of 4 marks each.  
Section D comprises 04 questions of 6 marks each.
5. All questions in section A are very short type answer.
6. There is no overall choice. However internal choice has been provided in 3 questions of 2 marks each, 2 questions of 4 marks each and 1 question of 6 marks each.

**Section – A**

**[1x20=20]**

1. Evaluate :- 
$$\begin{vmatrix} 1 & bc & a(b+c) \\ 1 & ca & b(c+a) \\ 1 & ab & c(a+b) \end{vmatrix}$$

2. If  $A = \begin{bmatrix} \alpha & 0 \\ 1 & 1 \end{bmatrix}$  and  $B = \begin{bmatrix} 1 & 0 \\ 5 & 1 \end{bmatrix}$ , find the values of  $\alpha$  for which  $A^2 = B$

3. If  $A = \begin{bmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{bmatrix}$ , then find the values of  $\theta$  satisfying the equation  $A^T + A = I_2$

4. If A is a skew - symmetric matrix of odd order n then prove that  $|A| = 0$ .

5. If the points (2, -3), ( $\lambda$ , -1) and (0, 4) are collinear, find the value of  $\lambda$ .

6. If A is a non-singular matrix, then prove that  $|A^{-1}| = |A|^{-1}$ .

7. Find the equation of the line in cartesian form which passes through the point (1,2,3) and is parallel to the vector  $3\hat{i} + 2\hat{j} - 2\hat{k}$ .

8. If either  $\vec{a} = \vec{0}$  or  $\vec{b} = \vec{0}$  then  $\vec{a} \times \vec{b} = \vec{0}$ . Is the converse true? Justify your answer with an example.
9. If a unit vector  $\vec{c}$  makes an angle  $\frac{\pi}{6}$  with  $\hat{i} \times \hat{j}$ , find the maximum value of  $(\hat{i} \times \hat{j}) \cdot \vec{c}$ .
10. If  $\vec{a}, \vec{b}, \vec{c}$  are non-coplanar then find the value of  $\frac{[\vec{a} + 2\vec{b} \quad \vec{b} + 2\vec{c} \quad \vec{c} + 2\vec{a}]}{[\vec{a} \quad \vec{b} \quad \vec{c}]}$
11. Find the intercepts cut off by the plane  $2x + y - z = 5$ .
12. Write the direction cosine of a line equally inclined to the three co-ordinate axes.
13. Find the value of  $\lambda$  so that the lines  $\frac{1-x}{3} = \frac{y-2}{2\lambda} = \frac{z-3}{2}$  and  $\frac{x-1}{3\lambda} = \frac{y-1}{1} = \frac{6-z}{7}$  are perpendicular to each other.
14. Find the distance of point  $2\hat{i} + \hat{j} - \hat{k}$  from the plane  $\hat{i} \cdot (\hat{i} - 2\hat{j} + 4\hat{k}) = 9$ .
15. A box of oranges is inspected by examining three randomly selected oranges drawn without replacement. If all the three oranges are good, then box is approved for sale otherwise it is rejected. Find the probability that a box containing 15 oranges out of which 12 are good and 3 are bad ones will be approved for sale.
16. A dice is thrown twice and the sum of the numbers appearing is observed to be 6. What is the conditional probability that the number 4 has appeared at least once?
17. If A and B are two events such that  $A \subset B$  and  $P(B) \neq 0$ . Prove that  $P(A/B) \geq P(A)$ .
18. The probability that a scheduled flight departs on time is 0.9, the probability that it arrives on time is 0.8 and the probability that it departs and arrives on time is 0.7. Find the probability that a plane arrives on time, given that it depart on time.
19. A fair coin and an unbiased die are tossed. Let A be the event "head appears on the coin" and B be the event "3 on the die". Check whether A and B are independent events or not.
20. Let A and B be two events. If  $P(A) = 0.2$ ,  $P(B) = 0.4$ ,  $P(A \cup B) = 0.6$ , then find  $P\left(\frac{A}{B}\right)$ .

**Section - B [2x6=12]**



21. Let  $F(x) = \begin{bmatrix} \cos x & -\sin x & 0 \\ \sin x & \cos x & 0 \\ 0 & 0 & 1 \end{bmatrix}$ . Prove that  $F(x) \cdot F(y) = F(x+y)$ .

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**OR**

Use matrix multiplication to divide Rs. 30,000 in two parts such that total annual interest at 9% on the first part and 11% on the second part amounts Rs. 3060.

22. Find x, if  $\begin{bmatrix} x & -5 & -1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix} \begin{bmatrix} x \\ 4 \\ 1 \end{bmatrix} = 0$

**OR**

If  $\begin{bmatrix} a+b & 2 \\ 5 & ab \end{bmatrix} = \begin{bmatrix} 6 & 2 \\ 5 & 8 \end{bmatrix}$ , find a and b.

23. If  $f(x) = \begin{bmatrix} 1 & x & x+1 \\ 2x & x(x-1) & x(x+1) \\ 3x(x-1) & x(x-1)(x-2) & x(x+1)(x-1) \end{bmatrix}$  then find  $f(100)$ .

24. If  $|\vec{a}| = a$ , then find the value of the following :-  $|\vec{a} \times \hat{i}|^2 + |\vec{a} \times \hat{j}|^2 + |\vec{a} \times \hat{k}|^2$ .

25. Find the angle between the lines where direction ratios are a, b, c and  $b-c, c-a, a-b$ .

**OR**

Prove that if a plane has the intercepts a, b, c and is at a distance p units from the origin then

$$\frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} = \frac{1}{p^2}$$

26. If two events A and B are such that  $P(\bar{A}) = 0.3$ ,  $P(B) = 0.4$ ,  $P(A \cap \bar{B}) = 0.5$  then find  $P(B/A \cup \bar{B})$ .

**Section - C**

**[4x6=24]**

27. If a, b, c are the roots of the equation  $x^3 + px + q = 0$ , then find the value of the determinant

$$\begin{vmatrix} 1+a & 1 & 1 \\ 1 & 1+b & 1 \\ 1 & 1 & 1+c \end{vmatrix}$$

**OR**

Using the properties of determinant, prove that

$$\begin{vmatrix} 1 + a^2 - b^2 & 2ab & -2b \\ 2ab & 1 - a^2 + b^2 & 2a \\ 2b & -2a & 1 - a^2 - b^2 \end{vmatrix} = (1 + a^2 + b^2)^3 .$$

Pg-3 of 5

28. Let  $\vec{a} = 2\hat{i} + \hat{j} + \hat{k}$ ,  $\vec{b} = \hat{i} + 2\hat{j} - \hat{k}$  and a unit vector  $\vec{c}$  be coplanar. If  $\vec{c}$  is perpendicular to  $\vec{a}$ , find  $\vec{c}$ .

29. Find the distance of the point  $(1, -2, 3)$  from the plane  $x - y + z = 5$  measured parallel to the line  $\frac{x}{2} = \frac{y}{3} = \frac{z-1}{-6}$ .

30. Find the vector equation of the line passing through  $(1, 2, -4)$  and perpendicular to the two lines:

$$\frac{x-8}{3} = \frac{y+19}{-16} = \frac{z-10}{7} \quad \text{and} \quad \frac{x-15}{3} = \frac{y-29}{8} = \frac{z-5}{-5} .$$

31. Coloured Balls are distributed in three bags as below.

Bag	Colour of Ball		
	Black	White	Red
I	1	2	3
II	2	4	1
III	4	5	3

A bag is selected at random and then two balls are randomly drawn from the selected bag. This happen to be black and red. What is the probability that they came from bag I.

**OR**

In a hockey match, both teams A and B scored same number of goals up to the end of the game, so to decide the winner, the referee asked both the captains to throw a die alternately and decided that the team, whose captain gets a six first, will be declared winner. If the captain of team A was asked to start, find their respective probabilities of winning the match.

32. Solve graphically :-

Maximize  $Z = -x + 2y$

Subject to

$$x \geq 3, \quad x+y \geq 5, \quad x+2y \geq 6, \quad y \geq 0 .$$

**Section - D**

**[4x6=24]**

33. Use the method of elementary row transformations to compute the inverse of  $\begin{bmatrix} 1 & 2 & 5 \\ 2 & 3 & 1 \\ -1 & 1 & 1 \end{bmatrix}$

**OR**

The sum of three numbers is 6. If we multiply the third number by 2 and add the first number to the result, we get 7. By adding second and third number to three times the first number, we get 12. Using the matrices, find the numbers.

34. Find the co-ordinates of the point P where the line through A ( 3, - 4, -5) and B( 2, - 3, 1) crosses the plane passing through three points L (2, 2, 1), M ( 3, 0, 1) and N (4, - 1, 0). Also find the ratio in which P divides the line segment AB.
35. A card from a pack of 52 cards is lost. From the remaining cards of the pack, two cards are drawn and are found to be both diamonds. Find the probability of the lost card being a diamond.
36. An aeroplane can carry a maximum of 200 passengers. A profit of Rs. 1000 is made on each executive class ticket and a profit of Rs. 600 is made on each economy class ticket. The airline reserves at least 20 seats for executive class. However at least 4 times as many passengers prefer to travel by economy class than by the executive class. Determine how many tickets of each type must be sold in order to maximize the profit for the airline. What is the maximum profit?

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**DELHI PUBLIC SCHOOL**  
**SAIL TOWNSHIP, RANCHI**  
**QUALIFYING EXAMINATION (2019-20)**

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- Physics**  
**M.M.- 70**

**General Instructions:-**

1. This paper consists of 37 questions .
2. Section- A has 20 questions of 1 mark each.
3. Section- B has 7 questions of 2 marks each.
4. Section- C has 7 questions of 3 marks each.
5. Section - D has 3 questions of 5 marks each.
6. There is no overall choice. However there are two internal choices each in Sec A, B and C and all the questions of Sec D have choices.

**Section-A**

1. Two point charges of magnitudes  $-2Q$  and  $+Q$  are located at points  $(a,0)$  and  $(4a, 0)$  respectively. What is the electric flux due to these charges through a sphere of radius  $3a$  with its centre at the origin?  
(a) zero                      (b)  $\frac{-2Q}{\epsilon_0}$                       (c)  $\frac{-Q}{\epsilon_0}$                       (d) None of these
2. There are two identical capacitors, the first one is uncharged and filled with a dielectric of dielectric constant  $K$ , while the other one is charged to a potential  $V$ , having air between its plates. If the two capacitors are now joined end to end, their common potential will be  
(a)  $\frac{V}{K-1}$                       (b)  $\frac{KV}{K+1}$                       (c)  $\frac{KV}{K-1}$                       (d)  $\frac{V}{K+1}$
3. Two heated wires of the same dimensions are first connected in series and then in parallel to a source of supply. The ratio of the heat produced in the two cases will be:-  
(a) 1:4                      (b) 1:2                      (c) 1:1                      (d) None of these
4. The E.M.F. of a cell is:-  
(a) always greater than the terminal voltage  
(b) always less than the terminal voltage  
(c) can be less than or more than the terminal voltage  
(d) always equal to the terminal voltage
5. A loop of irregular shape, carrying current, is located in an external magnetic field. If the wire is flexible, what shape will it acquire?  
(a) square                      (b) circular                      (c) triangular                      (d) remain in its original shape
6. Name the colour bands (in order) for a carbon resistor having a resistance of  $2.2 \text{ k}\Omega$ .
7. Define dielectric strength.

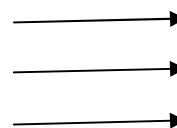
8. A germanium sample is heated from 300 K to 350 K. Depict graphically, the variation of its specific resistance with temperature.
9. Two identical charged particles moving with the same speed, enter a region of uniform magnetic field. If one of these enters normal to the field direction and the other enters along a direction of  $30^\circ$  with the field, what would be the ratio of their angular frequencies? Why?
10. Draw a graph to show the variation of electric field intensity (E) with distance (r) in case of
  - (i) an infinitely large, uniformly charged thin sheet.
  - (ii) a uniform linear distribution of charge of infinite length.
11. The electric potential V at any point (x, y, z) (all in metres) in space is given by  $V = 4x^2$  volts. Calculate the electric field at the point (1m, 0m, 2 m).
12. A set of n equal resistors of R each are connected in series to a battery of emf E and internal resistance R. A current I is observed to flow. Then the n resistors are connected in parallel to the same battery. It is observed that the current increases 10 times. Find n.
13. A parallel plate capacitor is charged by a battery, which is then disconnected. A dielectric slab is then inserted in the space between the plates. What changes, if any, will occur in the values of
  - (i) electric field between the plates
  - (ii) the energy stored in the capacitor?
14. Mention two advantages of using phosphor-bronze alloy for the suspension wire of a moving coil galvanometer.
15. A straight conductor AB of a circuit lies along the X axis from  $x = \frac{-a}{2}$  to  $x = \frac{+a}{2}$  and carries a current I. What is the magnetic field due to this conductor AB at a point  $x = +a$ ?
16. A point charge is placed at the centre of a closed Gaussian spherical surface of radius r. Electric flux passing through the surface is  $\Phi$ . How will the flux be affected if (a) the spherical surface is replaced by a cylindrical surface of the same radius and (b) the point charge is replaced by an electric dipole?

**OR**

A test charge q is moved without acceleration from A to C

along A to B and then B to C in the electric field E.

Calculate the potential difference between A and C.



17. In a region, steady and uniform electric and magnetic fields are present. These two fields are parallel to each other. A charged particle is released from rest in this region. What will be the nature of its trajectory?

18. Two metal wires of identical dimensions are connected in series. If  $\sigma_1$  and  $\sigma_2$  are the conductivities of the metal wires respectively, what is the effective conductivity of the combination?
19. A steady current flows in a metallic conductor of non-uniform cross-section. Which one-out of (a) drift speed (b) current and (c) electric field, remains a constant along the length of the conductor?

**OR**

A cell having an emf  $E$  and internal resistance  $r$  is connected across a variable external resistance  $R$ . As the resistance  $R$  is increased, plot the variation of potential difference ( $V$ ) across  $R$  with ( $R$ ).

20. A point charge of magnitude  $20 \mu\text{C}$  is placed at the centre of a circle of radius  $5 \text{ cm}$ . Another point charge  $q$  of value  $10 \mu\text{C}$  is moved on an arc of this circle such that the angle subtended by the arc at the centre is  $90^\circ$ . Find the work done.

**Section-B**

21. An infinitely long, positively charged straight wire has a linear charge density  $\lambda \text{ cm}^{-1}$ . An electron is revolving around the wire, with a point on it as its centre, with a constant speed in a circular plane, perpendicular to the wire. Deduce an expression for its kinetic energy.
22. Define flux. Consider a uniform electric field  $\vec{E} = 3 \times 10^3 \hat{i} \text{ NC}^{-1}$ . What is the flux of this field through  
 (a) a square of side  $10 \text{ cm}$  on a side whose plane is parallel to the  $Y\text{-}Z$  plane.  
 (b) the same square if the normal to its plane makes an angle of  $60^\circ$  with the  $X$ -axis?

**OR**

A wire  $AB$  of length  $L$  has linear charge density  $\lambda = kx$ , where  $x$  is measured from end  $A$  of the wire.

This wire is enclosed by a Gaussian hollow surface. Find the expression for the electric flux through the surface.

23. Using Kirchoff's laws, derive the condition for balance of a Wheat-stone's bridge arrangement.
24. Define 'drift speed' of electrons in a conductor.

A potential difference  $V$  is applied across the ends of a copper wire of length  $l$  and diameter  $D$ . What is the effect on drift velocity of the electrons if:-

- (i)  $l$  is doubled (b)  $D$  is halved?

Support your answer mathematically.

25. Derive an expression for the force acting per unit length between two infinitely long, antiparallel current carrying wires, placed at a finite distance from each other in vacuum. What will be the nature of force between them?

26. A circular coil of  $N$  turns and diameter  $d$  carries a current  $I$ . It is unwound and rewound to make another coil of diameter  $2d$ , current remaining the same. Calculate the ratio of the magnetic moments of the new coil to that of the original.

**OR**

A magnetic field of  $(4 \times 10^{-3} \hat{k})$  T exerts a force of  $(4 \hat{i} + 3 \hat{j}) \times 10^{-10}$  N on a particle having a charge of 1 nC and going in the X-Y plane. Find the velocity of the particle.

27. 4 cells of identical emf  $E$  and internal resistance  $r$  are connected in series to a variable resistor  $R$ .

The graph shows the variation of terminal voltage of the combination with the current output.

- (i) Calculate the internal resistance of each cell.  
(ii) For what current from the cells, does the maximum power dissipation occur in the circuit?

**Section-C**

28. Derive an expression for the energy stored in a parallel plate capacitor. In what form of energy is it stored? Also obtain the expression for the energy density.
29. What is meant by 'current density'? Derive its relation with the specific resistance of the material of the conductor, using the equation  $I = neAv_d$  (where the symbols carry their usual meaning).
30. State Ampere's Circuital law. Use it to find the magnetic field due to a current carrying solenoid. Show the graphical variation of the field along the axis of the solenoid.

**OR**

State Biot - Savart's law. The wire shown carries a current of 10 A. Determine the magnitude of the magnetic field at the centre O. Radius of the bent coil is 3 cm.

31. A slab of material of dielectric constant  $K$  has the same area as the plates of a parallel plate capacitor but has a thickness  $3d/4$ , where  $d$  is the plate separation. How is the capacitance going to vary when the slab is inserted between the plates?
32. Two cells of emf 1.5 V and 2 V and internal resistances  $1\Omega$  and  $2\Omega$  respectively are connected in parallel to pass a current in the same direction through an external resistance of  $5\Omega$ . Using Kirchoff's laws, find the potential difference across the  $5\Omega$  resistor.
33. Draw a labelled diagram of a cyclotron. Mention its principle of working. Show, mathematically, that the kinetic energy attained by the accelerated particle has a maximum finite value.

34. An infinite number of charges each equal to  $q$ , are placed along the X axis at  $x = 1, x=2, x=4, x = 8, \dots$  and so on
- (i) Find the electric field intensity at a point  $x = 0$  due to this set up of charges.
- (ii) What will be the electric field intensity if in the above set up, the consecutive charges have opposite signs?

**OR**

Two point charges  $+4\mu\text{C}$  and  $+1\mu\text{C}$  are separated by a distance of 2 m in air. Find the point on the line joining them at which the net electric field of the system is zero. State the principle used.

**Section-D**

35. State Gauss' theorem. Derive expressions for the electric field due to a uniformly charged, thin spherical shell at a point (i) inside the shell (ii) on its surface and (iii) outside the shell. Depict the results on an electric field  $E$  vs  $r$  graph where  $r$  is the distance of the point of observation from the centre of the shell.

**OR**

Derive an expression for the potential due to an electric dipole at any arbitrary point. Use this expression to obtain the value of the potential at (i) an axial point (ii) an equatorial point of the dipole.

36. With the help of a labelled diagram, state the principle of a potentiometer and explain briefly how the internal resistance of a primary cell can be measured with the help of this device. Give two ways of increasing its sensitivity.

**OR**

In a metre bridge set up, resistances  $X$  and  $Y$  are used in the left and right gaps respectively. The null point is found to be 60 cm away from the zero end. When a resistance of  $15\Omega$  is connected in series with  $Y$ , the null point shifts by 10 cm. Find the position of the null point if a resistance of  $30\Omega$  was connected in parallel with  $Y$ .

Will a metre bridge work if the positions of the galvanometer and the cell are interchanged?

Justify.

37. With the help of a labelled diagram, explain the principle and working of a moving coil galvanometer. Show that deflection ( $\theta$ ) is directly proportional to current ( $I$ ) flowing. An ammeter of resistance  $0.8\Omega$  can measure current upto 1A. (i) What must be the shunt resistance to enable it to measure a current upto 5 A? (ii) What is the combined resistance of the ammeter and the shunt?

**OR**

Derive an expression for the magnetic field due to a circular current carrying loop at a point on its axis. Deduce the expression for the magnetic dipole moment of an electron, orbiting around the nucleus, in the  $n^{\text{th}}$  orbit.





# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

Class:-XII  
Time- 3 Hrs.

Subject:- Chemistry  
M.M.- 70

### General Instructions:-

1. There are 37 Questions, all are compulsory.
2. Question No.- 1 to 20 are very short answer question carrying one mark each.
3. Question No.- 21 to 27 are short answer questions carrying two marks each.
4. Question No.- 28 to 34 are long answer questions carrying three marks each.
5. Question No.- 35 to 37 are also long answer questions carrying five marks each.
6. Use of calculator is not allowed.
7. Log table is provided.

1. How does Henry's constant of a gas in a particular solvent vary with temperature? [1]
2. What will happen to the boiling point of a solution if the weight (mass) of the solute dissolved is doubled but weight of solvent taken is halved? [1]
3. Under what condition do non ideal solution show negative deviations? [1]

### OR

Give an example of a compound in which hydrogen bonding results in the formation of dimer.

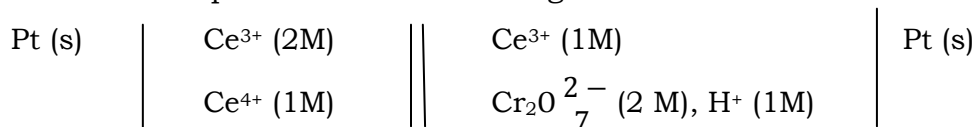
4. Why is vapour pressure of a liquid constant at constant temperature? [1]
5. While charging the lead storage battery, write the reaction taking place at anode. [1]
6. Unlike dry cell, the mercury cell has a constant cell potential throughout its useful life. Why? [1]
7. Under what condition an electrochemical (galvanic) cell can behave like an electrolytic cell. [1]
8. In the electrolysis of aqueous sodium chloride solution, write the half cell reaction which will occur at anode. [1]
9. For a certain reaction large fraction of molecule has energy more than the threshold energy, yet the rate of reaction is very slow. Why? [1]
10. The rate of reaction  $X \rightarrow Y$  becomes 8 times when the concentration of the reactant is doubled. Write the rate law expression. [1]
11. The rate of reaction is given by  $\text{rate} = K [N_2O_5]$ . In this equation, what does K stands for? And define it also. [1]
12. What is the fraction of molecules having energy equal to or greater than activation energy? What is this quantity called? [1]

13. Write the difference between sol and gel. [1]
14. Chemisorptions is referred as activated adsorption. Why? [1]
15. Lyophilic colloids are also called reversible sols. Why? [1]
16. Why does leather gets hardened after tanning? [1]
17. How is copper extracted from low grade copper ores? [1]
18. Write two basic requirements for refining of a metal by Mond Process. [1]
19. What is the role of silica in the extraction of copper from copper pyrite? [1]
20. Sulphide ores of metal are usually concentrated by froth flotation process. Name a sulphide ore which is an exception and concentrated by leaching method. [1]
21. Explain the following:
- (a) Why do doctors advise gargles by saline water in case of sore throat?
- (b) A person suffering from high blood pressure is advised to take minimum quantity of salt? [2]
22. Why on dilution the  $\Lambda_m$  of  $\text{CH}_3\text{COOH}$  increases drastically while that of  $\text{CH}_3\text{COONa}$  increases gradually? Explain. [2]
23. Write the difference between collision frequency and effective collision. [2]
24. Differentiate between peptisation and coagulation. [2]
25. What do you mean by activity and selectivity of a catalyst? [2]
26. Write the principle of the following :
- (a) Chromatography (b) Froth floatation process. [1+1=2]
27. How are metals used as semiconductor refined? What is the basic principle of the method used. [1+1=2]
28. Calculate the density of  $\text{H}_2\text{SO}_4$  solution if its molality and molarity are 94.5 and 11.5 respectively. [3]

**OR**

A storage battery contains a solution of  $\text{H}_2\text{SO}_4$  38 % by weight. At this concentration, Van't Hoff factor is 2.50. At what temperature will the battery content freeze?

29. Calculate the potential of the following cell:



Given : -  $E^0 \text{Ce}^{4+} | \text{Ce}^{3+} = 1.7 \text{ V}$

$E^0 \text{Cr}_2\text{O}_7^{2-} | \text{Cr}^{3+} = 1.3 \text{ V}$

[3]

30. The activation energy ( $E_a$ ) of a reaction is  $94.14 \text{ KJ mol}^{-1}$  and the value of rate constant at  $40^\circ \text{C}$  is  $1.8 \times 10^{-5} \text{ sec}^{-1}$ . Find frequency factor.

**OR**

The decomposition of a hydrocarbon has value of rate constant as  $2.5 \times 10^4 \text{ sec}^{-1}$  at  $27^\circ\text{C}$ . At what temperature would rate constant be  $7.5 \times 10^4 \text{ sec}^{-1}$  if energy of activation is  $19.147 \text{ KJ mol}^{-1}$ ?

( $\log 2 = 0.3010$ ,  $\log 3 = 0.4771$ ,  $\log 5 = 0.6990$ ) [3]

31. (a) State Hardy- Schulze Rule.  
 (b) Describe the following types of colloids giving an example of each-multimolecular and macromolecular colloids. [1+2=3]
32. (a) Gelatin is generally added ice-cream. Why?  
 (b) A sol of Ag I can be positively or negatively charged. Explain how and why? [1+2=3]

**OR**

- (a) Out of starch and ferric hydroxide sol, which one can easily be coagulated and why?  
 (b) What is observed when an emulsion is centrifuged?  
 (c) What is zeta-potential?

33. Write the chemical reaction involved in the extraction of gold by cyanide process. Also give the role of Zn in the extraction. [3]

34. Explain the significance of leaching in the extraction of aluminium. [3]

35. (a) An M/10 solution of potassium ferricyanide is 46% dissociated at  $27^\circ \text{C}$ . Find its osmotic pressure. ( $R = 0.082 \text{ litre atm mol}^{-1}\text{K}^{-1}$ ).

- (b) What is Van't Hoff Factor? Give the condition when Van't Hoff factor is

(i) equal to unity (ii) Less than one (iii) greater than one.

Explain your answer by giving suitable example. [2+3=5]

**OR**

- (a) The density of a 2.45 M aqueous methanol solution is  $0.976 \text{ g ml}^{-1}$ . What is the molality of the solution? ( $\text{CH}_3\text{OH} = 32 \text{ g mol}^{-1}$ . ]

- (b) What is vapour pressure of a liquid? Define Raoult's Law for a solution containing non- volatile solute. What is the effect of non-volatile solute on vapour pressure of a liquid?

36. (a) The following data were obtain during the first order thermal decomposition of  $\text{SO}_2\text{Cl}_2$  at a constant volume.



Experiment	Time / $\text{Sec}^{-1}$	Total Pressure / atm
1	0	0.5
2	100	0.6

Calculate the rate of reaction when total pressure is 0.65 atm.

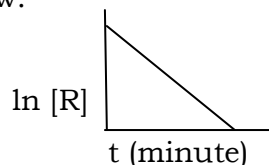
- (b) Derive an expression for rate constant of a first order reaction and show that time required for completion of half of the first order reaction is independent of initials concentration. [2+3=5]

**OR**

- (a) A first order reaction is 15 % complete in 20 minutes. How long will it take to complete 60 %?

- (b) For a certain chemical reaction variation in the concentration  $\ln [R]$  vs time (min)

Plot is shown below.



For this reaction :-

- (a) What is the order of the reaction?  
(b) If initial concentration for this reaction becomes half, how will  $t_{1/2}$  vary?  
(c) Draw the plot of  $\log [R]_0/[R]$  vs time (s)?
37. (a) How does Cathodic protection of iron operate?  
(b) Give one merit and one demerit of Nicad cell over lead storage cell.  
(c) What is the role of  $ZnCl_2$  in a Dry Cell? Explain it. [5]

**OR**

- (a) State and explain briefly Faraday's Second law of electrolysis.  
(b) Draw labelled diagram of standard hydrogen electrode (SHE). Write its half cell reaction and  $E^\circ$  value.



# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- Biology**  
**M.M.- 70**

### **General Instructions:-**

1. All questions are compulsory.
  2. The question paper consists of sections A, B, C, D.
  3. Internal choice is given in all the sections.
  4. Section A contains 5 questions of 1 mark each. Option given in question no. 1 and 5.
  5. Section B has 7 questions of 2 marks each, internal choice in question no. 6 and 9.
  6. Section C is of 12 questions of 3 marks each, internal choice in question no. 14, 16, 19 and 23.
  7. Section D has 3 questions of five marks each and internal choice is given in all three questions.
- Wherever necessary the diagrams drawn should be neat and properly labelled.

### **Section - A**

1. What do you understand by the term 'monosporic development' w.r.t. reproduction in flowering plants.

OR

Chromosome number is species specific character but why is it different in male and female honey bee?

2. How are the blastomeres arranged in a blasto cyst.
3. Name two seral stages which follows the reed-swamp stage during the hydrarch succession.
4. Why is the pyramid of biomass in sea generally inverted.
5. Mention two disadvantages / ill effects of disposal of thermal waste water in water bodies.

OR

Define stratification. Give example.

### **Section - B**

6. Distinguish between monoecious and dioecious plant.  
Give one example each of bisexual animal and unisexual animal.

OR

In what manner pollination occur in yucca plant.

7. (a) Name the special asexual reproductive structure found in Chlamydomonas and sponge.  
(b) What is known as 'Terror of Bengal' and why?
8. (a) Name two water plant which are pollinated by wind or insect.  
(b) Give two characteristics of wind pollinated flower.
9. What is signal for parturition known as and where does it originate?

OR

- (a) Name two hormones produced by placenta during pregnancy.  
(b) Why all copulations do not lead to fertilisation and pregnancy.

10. (a) What is meant by 'altitude sickness'?
- (b) How does the body solve this problem?
11. How is rate of decomposition influenced by chemical composition of detritus.
12. Why do we never see any cattle or goats browsing on weed calotropis?

**Section - C**

13. (a) Differentiate between oestrus and menstrual cycle.
- (b) Define meiocytes.
14. (a) How is development of new organism different in honeybee and rotifers?
- (b) Name the process.
- (c) Give two more examples of similar development.

OR

State the importance of emasculation and bagging in carrying out artificial hybridization.

15. Draw a T.S. of young anther of an angiosperm. Label the different layers of the wall and write their functions.
16. Draw a well labeled diagram of a typical anatropous ovule and give the function of any four.

OR

Hybrid seeds have to be produced every year. Why and how can this problem be solved.

17. Continued self - pollination result in inbreeding depression.  
Mention the devices developed by flowering plants to encourage cross-pollination.
18. Mention the target cells of luteinizing hormone in human males and females. Explain the effects and the changes which the hormone induces in each case.
19. Draw a well labeled diagram of human female reproductive system and give the function of any six parts.

OR

(a) Draw a well labeled diagram of a sectional view of seminiferous tubule and give the function of sertoli cells and leydig cell.

(b) Why are testis situated outside the abdominal cavity.

20. Mention there different ways of measuring the population density and give an example each.
21. Differentiate between primary productivity and secondary productivity.  
Mention the annual net primary productivity of whole biosphere and also mention the productivity of the ocean.
22. Differentiate between primary and secondary succession. Provide one example of each.

23. Mention the factors which account for greater biological diversity in the tropics.

OR

Distinguish between

- (a) In - situ conservation and Ex - situ conservation.
  - (b) Standing state and standing crop.
  - (c) Litter and detritus.
24. Expand FOAM. How was integrated waste water treatment process used within a natural system?

**Section - D**

25. (a) Explain the menstrual phase in human female. State the levels of ovarian and pituitary hormones during this phase.
- (b) Why is follicular phase in the menstrual cycle also referred as proliferative phase? Explain.
- (c) Explain the events that occur in a graafian follicle at the time of ovulation and there after.
- (d) Draw a graafian follicle and label antrum and secondary oocyte.

OR

- (a) Draw a L.S. of a pistil showing pollen tube entering the embryo -sac in an angiosperm and label any six parts other than stigma , style and ovary.
- (b) Write the changes a fertilized ovule undergoes within the ovary in an angiosperm plant.
26. (a) What is meant by the 'The Evil Quartet'.
- (b) Describe them in brief.

OR

- (a) Taking an example of a small pond explain how the four components of an ecosystem function as a unit.
- (b) Name the type of food chain that exists in a pond.
27. Define Biomagnifications. Diagrammatically explain biomagnifications of DDT in an aquatic food chain.

OR

Explain in brief :-

- (a) Accelerated Eutrophication.
- (b) Greenhouse Effect.
- (c) Organic farming.
- (d) Biochemical Oxygen Demand .
- (e) Commensalism .



# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

Class:-XII  
Time- 3 Hrs.

Subject:- Political Science  
M.M.- 80

### General Instruction:-

1. There are 26 Questions, all are compulsory.
2. Question No.- 1 to 13 are very short answer question carrying one mark each.
3. Question No.- 14 and 15 are short answer questions carrying two marks each.
4. Question No.- 16 to 19 are long answer questions carrying four marks each.
5. Question No.- 20 to 22 are source based answer questions carrying five marks each.
6. Question No.- 24 to 26 are optional questions carrying six marks each.

1. What is LTBT? [1]
2. 'Non alignment does not imply neutrality or equidistance.' What does this mean? [1]
3. When and for how many years did civil war of Tajikistan take place? [1]
4. Arrange them in chronological order: [1x4]
  - Soviet invasion of Afghanistan
  - Fall of Berlin wall
  - Disintegration of Soviet Union
  - Russian revolution
5. Name the bombs dropped at Hiroshima and Nagasaki? [2]
6. When was NATO formed? [1]
7. Mention main aim of Truman's Doctrine. [1]
8. Where was NAM's first summit initiated? [1]
9. Mention the full forms for these abbreviations: [1x4]
  - (a) SALT-I      (b) START-I      (c) CENTO      (d) SEATO
10. What was Nehru's first address to constituent assembly known as? [1]
11. Who was called the Frontier Gandhi? [1]
12. What was the instrument of accession? [1]
13. Formation of separate Andhra state was done on \_\_\_\_\_. [1]
14. Who became the first chief election commissioner and who is the current one? [2]
15. Constitution was adopted on \_\_\_\_\_ and signed on \_\_\_\_\_. [2]
16. Match the following: - [4]
  - a) S. A Dange      i) Bhartiya Janasangh
  - b) Shyama Prasad Mukherjee      ii) Swatantrata party
  - c) Minoo Masani      iii) Praja Socialist party
  - d) Asoka Mehta      iv) Communist



17. Explain briefly the three challenges to democracy. [4]
18. Why did superpowers have military alliances with smaller countries? Give at least three reasons. [4]
19. Mention any three features that distinguish the Soviet economy from that of capitalist country like the US. [4]



20. Give the explanation to this paper cutting. Which incident is talked off here? [5]

21. Study the following passage carefully and answer the question that follows.

The smaller states in the alliances used to link the superpowers for their own purposes. They got the promise of protection, weapons and economic aid against their local rivals, mostly regional neighbors with whom they had rivalries. The alliance systems led by the two superpowers, therefore, threatened to divide the entire world into two camps. This division happened first in Europe. Most countries of western Europe shield with the US and those of eastern Europe joined the soviet camp. That is why, these were also called as the 'western' and the 'eastern' alliances.

- (i) Name one organization each related to the 'western' and 'eastern' alliances.
- (ii) Why were the smaller states interested in joining the super alliances?
- (iii) How did the 'alliance system' threaten to divide the world?
- (iv) What was known to be the largest Garage Sale? [1+2+2+2=7]

22. Mark these states in given outline map of India. [5]
- (i) The state which was carved out of Madhya Pradesh.
  - (ii) The state which opposed its merger with India after independence.
  - (iii) The first state of free India having a communist government.
  - (iv) The state adjoining Pakistan territory up to 1971.
  - (v) The state which became agricultural progress due to green revolution.

23. Write a note on election, ideologies of party, election system of Indian government during Independence and today. [5]

24. Explain the main arguments in the debate that ensued between industrialization and agricultural development at the time of second five-year plan. [6]

**OR**

What is the relevance of non-aligned movement after the end of cold war?

25. In what three ways did the collapse of Soviet Union affect the world politics? Explain. [6]

**OR**

What forced the union government of India to appoint the state reorganization commission in 1953? Mention its two main recommendations. Name any four new states formed after 1956.

26. "Congress had remained a social and ideological coalition for a long period". Justify the statement. [6]

**OR**

What was shock therapy? What is the best way to make a transition from communism to capitalism? How?

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# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

Class:-XII  
Time- 3 Hrs.

Subject:- History  
M.M.- 80

### General Instructions:

1. Answer all the questions .
2. Answer to questions no 1 to 3 carries 2 marks .It should not exceed 30 words
3. Answer to question no 4 to 10 carrying 4 marks should not exceed 100 words . You need to attempt any 6 among them
4. Answer to question no 11to 13 carries 8 marks . The answer should not exceed 350 words.
5. Question no 14 to 16 are source based questions and have no internal choices.
6. Question no17 is a Map question that includes identifying and location of significant test items .

### Section A

[2x3=6]

1. Why was Mouryan Empire regarded as a major landmark in the early Indian History?
2. Mention two strategies adopted to identify social differences among the Harappans
3. Why are the Buddhist stupas said to be " stories in stone" ?

### Section B

[4x6=24]

4. What factors, in your opinion ,are responsible for the collaspe of a mature harappan civilization by 1800 BCE ?
5. What do you mean by Numismatics? How has it helped historians to reconstruct possible commercial networks ?
6. Who were known as 'Mlechchas'?  
Compare the position of Mlechchas with that of the untouchables .
7. How was the fate of Amaravati Stupa different from than that of the Sanchi Stupa ?
8. Describe the distinctive features of Mohenjodaro .
9. Describe how Buddha's teachings have been reconstructed from the stories of Sutta-Pitaka ?  
Mention about the Tipitaka .
10. The land grand of Prabhavati Gupta is considered as an exceptional case .Why ?

### Section C

[3x8=24]

11. What does Asokan inscriptions tell us about the Mouryas ?Describe the limitations of the inscriptional evidences .

12. Discuss how and why stupas were built .
13. Explain the Brahmanical practice of Gotra.

### Section D

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

#### A Tiger-Like Husband

This is a summary of a story from the Adi Parvan of the Mahabharata :

The pandavas had fled into the forest .They were tired and fell asleep ;only Bhima, the second pandava ,renowned for his prowess ,was keeping watch. A man-eating rakshasa caught the scent of of the pandavas and sent his sister Hidimba to capture them. She fell in love with Bhima ,transformed herself into a lovely maiden and proposed to him .He refused .

Meanwhile ,the rakshasa arrived and challenged Bhima to wrestling match .Bhima accepted the challenge and killed him. The others woke up hearing the noise . Hidimba introduced herself ,and declared her love for Bhima . She told Kunti : " I have forsaken my friends ,my dharma and my kin; and good lady,chosen your tiger like son for my man...whether you think me fool, or your devoted servant ,let me join you ,great lady with your son as my husband "

Ultimately Yudhoshtira agreed to the marriage on condition that they would spent the day together but that Bhima would return every night . The couple roamed all over the world during the day . In due course Hidimba gave birth to a rakshasa boy named Ghatotkacha . Then the mother and son left the Pandavas . Ghatotkacha promised to return to the Pandavas whenever they needed him

Some historians suggest that the term rakshasa is used to describe people whose practices differed from those laid down in Brahmanical texts .

- (i) How did the story from Adi Parvan play an important role in shaping the values and ethos of the society? [2]
- (ii) How is this story a unique example of exogamy? [2]
- (iii) How did Hidimba and Yudhistira interpret dharma in their context? [3]

15. Read the given passage carefully and answer the questions that follow .

#### The Anguish of the King

When the King Devanampiya Piyadassi had been ruling for eight years ,the ( country of the) Kalingas (present day coastal odisa ) was conquered by him . One hundred thousand men were deported and a hundred thousand were killed and many more died.

After that ,now that (the country of ) the Kalingas has been taken, Devanampiya(is devoted),to an intense study of Dhamma ,to the love of Dhamma and to instructing (the people) in Dhamma . This is the repentance of Devanampiya on account of his conquest of the (country of the) Kalingas .

For this considered very painful and deplorable by Devanampiya that ,while one is conquering an unconquered (country) slaughter ,death and deportations of people (take place ) there .

- (i) Who was called Devanampiya Piyadassi"? Give his brief description . [2]
- (ii) Explain the effects of the Kalinga war on Asoka . [2]
- (iii) Mention the limitations inscriptional evidence of History with reference to this particular inscription [3]

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

"The Rig Veda mentions pur ,meaning rampart ,Fort or stronghold . Indra ,the Aryan war-god is called purandara, the fort-destroyer .

Where are or were these citadels ? It has in the past supposed that they were mythical. The recent excavations of Harappa may be thought to have changed the picture .Here we find a highly evolved civilisation of essentially non-aryan type ,now known to have employed massive fortifications...what destroyed this fiemely settled civilisation ? Climatic ,economic or politicaldeteriotio may have weakened it ,but its ultimate exti ction is mere likely to have been completed by deliberate and large scale destruction . It may be no mere chance that at a later date if period of Mohenjodaro men,women and children ,appear to have been massacred there . On circumstantial evidence ,Indra stands accused "

(i) Why is Indra called Purandara? [2]

(ii) To which civilisation do the scholars associate the puras mentioned in the Rig eda? Why? [2]

(iii) Is it right to say the Aryan invasion led to the destruction of the Harappan civilisation ? [3]

**Section E** [5]

17. On the given political map of India mark and label the following appropriately

a) A ,B, C - major centres of Harappan civilization .

b) D - Mark and write the name of the famous Stupa of Asoka located in the present Madhya Pradesh

a) E - Mark the place where the famous war which changed the mind of Asoka - The Great Mouryan Emperor took place

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# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- Sociology**  
**M.M.- 80**

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### **General Instructions:-**

1. Questions 1 to 14 are of 2 marks each and may be answered in 30 words .
2. Questions 15 to 21 are of 4 marks each and may be answered in 80 words.
3. Questions 22 to 24 are of 6 marks each and may be answered in 200 words .
4. Question 25 carries 6(4+2) marks and is to be answered with the help of the passage given.

- 
1. Define The Term Demography.
  2. Define stabilized natural increase of population.
  3. High ratio of infant and maternal mortality rate indicate backwardness and poverty .Justify.
  4. In terms of language mention four categories of tribes.
  5. Define the term Sanskritisation.
  6. Explain the role of Caste in politics.
  7. What is surplus value ?
  8. Define the term Marketisation.
  9. What is tribal Haat?
  10. What is Social exclusion?
  11. Explain Prejudices.
  12. Who are the minorities in sociological sense?
  13. Define a Nation state.
  14. What is Regionalism?
  15. Discuss the theory of demographic transition.
  16. Explain the main factors influencing the formation of tribal identity today?
  17. Highlight the sources of conflicts between National Development and Tribal development .
  18. How did the advent of colonialism in India produced a major upheaval in the economy?
  19. What are some of the contemporary issues related to women?
  20. Discuss Communalism in Indian context.

**OR**

Explain how India has managed cultural diversity?

21. Differentiate between a democratic and Authoritarian state.
22. Market has significance much beyond its economic function. Explain.

**OR**

What are the arguments for and against the Globalisation? Explain. In your opinion, will long term benefits of globalization exceed its costs? Give reasons for your answer.

23. Explain the Malthusian theory of population growth?

**OR**

How does the changing age structure offer a demographic dividend for India?

24. What are the different senses in which Secularism has been understood in India?
25. Read the given passage and answer the following questions .

Who are these women you give such names to. Whose womb did you take your birth in? Who carried the killing burden of you for nine months ? Who was the saint who made you the light in her eye. How would you feel if someone said about your mother."That old chap's mother, you know , she's a gateway to hell'. Or your sister, "that so-and so-s' sister, she's a real storehouse of deciet'. ...Would you just sit and listen to their bad words?

....Then you get blessed with a bit of education and promoted to some important new office- and you start feeling ashamed of your first wife. Money works its influence on you and you begin to say to yourself ,what does a wife matter after all? Don't we just give them a few rupees a month and keep them at home like any other servant , to do the cooking and look after the house? You begin to think of her like some female slave you've paid for... if your horse died it wouldn't take long to replace it, and there's no great labour needed to get another wife either. .. The problem is Yama hasn't got time to carry off wives fast enough, or you'd probably get through several different ones in one day!

**( FROM STREE PURUSH TULNA 1882)**

- b) Were social reform movements fought only by males? Give reasons for your answer.
- c) Name any two women's organization.

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

QUALIFYING EXAMINATION (2019-20)

Class:-XII

Time- 3 Hrs.

Subject:-Business Studies

M.M.- 80

### General Instructions:-

1. Answer to questions carrying 1 mark may be from one word to one sentence.
2. Answer to questions carrying 3 marks may be from 50 to 75 words.
3. Answer to questions carrying 4-5 marks may be about 150 words.
4. Answer to questions carrying 6 marks may be about 200 words.
5. Attempt all parts of a question together.

### Answer the following questions:-

1. Match the example in column I with the function in column II

Column I  
i. Matching outcomes with targets  
ii. Objectives  
iii. Resources for implementation  
iv. Recruitment and training  
v. Supervision and motivation

Column II  
a. Planning  
b. Organizing  
c. Directing  
d. Staffing  
e. Controlling

Select from the following choices:

- a) i-e ; ii-c ; iii-d ; iv-a ; v-b  
c) i-e; ii-a; iii-b; iv -c; v-d

- b) i-e ; ii-a ; iii-c ; iv-b ; v-d  
d) i-e; ii-a; iii-b; iv-d; v-c

[1]

2. Principles of management are not :-

a) Flexible                      b) Behavioural                      c) Absolute                      d) Universal

[1]

3. Which of the following does not characterize the business environment?

a) Uncertainty                      b) Employees                      c) Relativity                      d) Complexity

[1]

4. According to which concept of marketing, availability and affordability of the product are considered to be the key to the success of the firm? [1]

(a) Production Concept    (b) Product Concept    (c) Sales Concept    (d) Marketing Concept

5. Which function of management relates to assigning duties , grouping tasks, establishing authority and allocating resources required to carry out a specific plan?

a) Planning                      b) Organising                      c) Staffing                      d) Directing

[1]

6. Same battery can be used in different mobile phones of a particular brand. This is an example of which of the following techniques of scientific management?

a) Standardization                      b) Simplification  
c) Method Study                      d) Functional Foremanship

[1]



7. Many businesses are using social media like Facebook and Twitter to promote themselves. This is an example of which dimension of Business Environment:  
a) Social            b) Economic            c) Legal            d) Technological            [1]
8. Puma, a shoe making company sells its products through its own website, this method of selling comes under which level of distribution?  
(a) zero level channel            (b) one level channel  
(c) two level channel            (d) three level channel            [1]
9. Which of the following is not an organisational objective?  
a) Survival  
b) Giving employment opportunities to disadvantaged sections of society  
c) Profit  
d) Growth            [1]
10. Which of the following is not a principle of management given by Taylor?  
a) Functional Foremanship            b) Harmony not discord  
c) Maximum not restricted output            d) Science, not rule of thumb            [1]
11. Recently the government has decontrolled the price of Diesel. This is an example of:  
a) Privatization            b) Globalization.            c) Liberalization            d) Nationalization            [1]
12. This is an important public relations tool.  
a) News            b) Events            c) Sponsorships            d) All of these            [1]
13. State what is included in “legal environment” of business.            [1]
14. “The understanding of Business Environment enables the firm to identify Opportunities”. What is meant by ‘opportunities ‘here?’            [1]
15. ‘Beauty Products Ltd.’ is a natural and ethical beauty brand famous for offering organic beauty products for men and women. The company uses plant based materials for its products and is the No.1 beauty brand in the country. It not only satisfies its customers but also believes in overall protection of the planet.  
Identify the marketing management philosophy being followed by ‘Beauty Products Ltd.’            [1]
16. Define marketing mix.            [1]
17. An American shoe manufacturing company launched a new range of footwear with imprints of Indian Lords. The Company had expected that it would impress the Indian living in America. However, the Indian community was in a big shock, mixed with anguish and anger. As a result , the company had to withdraw the entire stock from the market and also apologized for this. Which dimension of business environment is highlighted in the given statement?            [1]
18. Define liberalisation as a process of economic reforms.            [1]
19. What is meant by direct channel or zero level?            [1]
20. Define ‘Grading’ as a function of marketing.            [1]
21. Name the levels of management engaged in:  
a) Introducing a new product line and deciding the capital structure of the company.  
b) Recruitment of casual labourers.  
c) Devise a suitable advertising campaign to sell a new product/service a company is launching.            [3]
22. Explain ‘Increasing competition’ and ‘More demanding customers ‘ as impact of Government policy changes on Business and Industry.            [3]

**OR**

Explain ‘Dynamic nature’ and ‘Uncertainty ‘ as features of Business Environment.

23. 'Though branding adds to the cost, it provides several advantages to the consumers.' In the light of this statement, state any three advantages of branding to customers. [3]
24. Is management a profession like Accounting, Medical and Legal professions? Give reasons in support of your answer. [4]

**OR**

'The skillful and personal application of existing knowledge to achieve desired results is called art'. In the light of this statement, describes whether management is an art or not.

25. In each of the following cases which principle of management as given by Henri Fayol is being violated?
- a) When no division of the company has a separate plan of action.
  - b) When a sales manager is not given the right to discount to the buyer necessary to conclude a large sales contract, which will be profitable for the company.
  - c) When a subordinate receives order from two superiors.
  - d) When a manager awards contract for supply of raw material to a particular party, which happens to be owned by his relative ignoring other parties, who can supply the same at a cheaper rate.
  - e) When a subordinate habitually contacts higher authorities in the company by passing his/her immediate superior.
  - f) When the tools and/or raw materials are not found at the right place in the factory.
  - g) When the employee is given responsibility to achieve target production of 500 units with no authority to access over raw materials.
  - h) When the manager grants one month medical leave to a supervisor with pay and only one week medical leave to accountant. [ $\frac{1}{2} \times 8 = 4$ ]
26. Radha found a worm crawling out of newly opened tetra pack of a juice manufactured by a reputed company, Zest, Ltd. She went back to the shopkeeper from whom the pack was purchased who directed her to call up the customer care center. When all her efforts failed, she went to a consumer activist group to seek help. The group decided to help Radha and take measures to impose restrictions on the sale of the firm's products of the particular batch and urge customers to refrain from buying the products of the company. Zest Ltd, lost its image in the market. The CEO gives the responsibility of bringing back the lost image of the company to a Manager.
- a) Identify and explain the concept of Marketing Management which will help the Manager in getting the firm out of the above crisis.
  - b) Also explain the role of above identified concept by stating any two points. [4]
27. Kushal Ltd. is a leading automobile company in which the various departments are setting up their own objectives without paying any interest to the organisational objectives.
- a) Which aspect of management the company is lacking? What will be its impact on the organisation? Explain.
  - b) Identify the principle of management which has been overlooked by this organisation and explain it briefly.
  - c) State any two values neglected by the people of this organisation. [5]

**OR**

Mr. Ravi, General Manager in Unique Ltd. used his theoretical knowledge of his management studies in a unique and creative way. All the employees working under him are very happy and satisfied because of his behavior. He always welcomes the suggestions. He treats all his employees fairly. He never discriminates employees on the basis of gender, religion or caste etc.

- a) State and explain briefly the nature of management highlighted in the above case.
- b) State the two principles of management followed by the manager.
- c) State any two values followed by the manager.

28. Demonetization was announced on November 8<sup>th</sup> 2016, by the Prime Minister Shri. Narendra Modi. The banned banknotes constituted 86.4% of the total money in circulation. When demonetization was announced, the RBI and the currency printing presses were unprepared to replace the volume of the recalled currency notes. The currency printing machinery had to run overtime to meet the targets. The RBI spent close to Rs.13,000 crore over the next two years to remonetize Indian money market in post-demonetisation phase. New notes of Rs.500 and Rs.2000 were introduced. The designs were markedly different from the recalled ones. This escalated the cost of printing as it had several new features.

In the context of the above case:-

- a) what do you understand by the term 'demonetisation'?
- b) why is demonetisation considered to be an expensive process?
- c) Briefly outline any three features of demonetisation.

[1+1+3=5]

29. There are number of factors that affect the fixation of price of a product. State and explain any five such factors.

[5]

**OR**

State and explain any five functions performed by middlemen with relation to channels of distribution.

30. B Ltd. wants to modify its existing product, CD players in the market due to decreasing sales. What decisions/steps should each level of management take to give effect to this decision?

[6]

31. Rajat joined as a CEO of Bharat Ltd., a firm manufacturing Computer hardware. On the first day he addressed the employees. He said that he believed that a good company should have an employee suggestion system and he wish minimise employee turnover to maintain organisational efficiency. He informed all employees that he would ensure that all agreements are were clear, fair, and there was judicious application of penalties. However, he said that he believed that lazy personnel should be dealt with sternly to send the message that everyone was equal in the eyes of management. Also that he would want to promote a team spirit of unity and harmony among employees, which would give rise to a spirit of mutual trust and belongingness among team members and eventually minimise need for using penalties. He told all present that the interests of the organisation should take priority over the interests of any one individual employee.

Identify and briefly explain any four principles of management given by Fayol, which Rajat highlighted in his address to the employees and quote the relevant sentence for the identified principles.

[6]

**OR**

Shiva Computers Ltd. is a leading company in Computer Technology and IT services. The CEO of the company attributes the success of the company to its managerial team spirit, which have helped to handle rapid changes in technologies and to transform threats into opportunities. Like any other business enterprise profits are important for survival and growth of Shiva Computers Ltd. The management of the company believes that a satisfied employee creates satisfied customer, who in turn creates profits that leads to satisfied shareholders. The company has a strong sense of social responsibility. It has set up many educational institutions in the field of management, engineering and computer education in which half of the students are girls.

On the basis of the given information about Shiva Computers Ltd. answer the following :-

Identify and explain the objectives of the company discussed in the above para. Also quote the lines for the identified objectives.

32. Explain in detail the role of personal selling with reference to its importance to businessmen. [6]

33. "Tasty Food", is a famous chain selling a large variety of products in the Indian market. Their products include chips, biscuits, sweets and squashes. It charges a comparatively higher price than its competitors as it sells quality products. Besides, it offers regular discounts to its customers and easy credit terms to its retailers. It has five of its own retail shops. It also sells its products through grocery stores so that the products are available to customers at the right place and at the right time. It regularly uses different communication tools to increase its sales. The above para describes the combination of marketing mix variables used by "Tasty Food" to prepare its market offering. Identify and explain the variables. [6]

**OR**

As the number of people making online purchases has increased manifolds, there is a growing concern about the disposal and management of packaging waste. Every item bought is delivered with excess packaging and sometimes even non-biodegradable materials are used.

In the context of above case:

- a) Name the other two levels of packaging that the marketers may be using besides the immediate package.
- b) Describe briefly any two points highlighting the functions of packaging.
- c) State any two importance that should be kept in mind by the marketers while designing the packaging of its products.

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# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- Accountancy**  
**M.M.- 80**

### General Instructions:-

- i. All part of a question should be attempted at one place.

1. State the basis of accounting on which Receipt and payment Account is prepared in case of Not for Profit organization. [1]
2. When is donation received shown in the Balance Sheet? [1]
3. What is meant by " Unlimited Liability of a partner." [1]
4. Mention two items that may appear on the debit side of a partner's fixed capital account. [1]
5. What is meant by Super Profit? [1]
6. What is meant by Sacrificing Partner? [1]
7. Under what circumstances premium for goodwill paid by the incoming partner would never be recorded in the books of accounts. [1]
8. How goodwill is recorded on retirement or death of a partner. (Write Journal Entry) [1]
9. At what rate interest is payable on the amount remaining unpaid to the executor of deceased partner? [1]
10. State two basis for determination of profit from the date of last Balance Sheet to the date of death/retirement. [1]
11. Give any one distinction between sacrificing ratio and gaining ratio. [1]
12. Explain the accounting treatment of goodwill when new partner cannot bring his share Of goodwill in cash. (Write journal entry only). [1]
13. Explain the accounting treatment of goodwill when goodwill account already appears in the books of firm and new partner brings his share of goodwill in cash. (Write journal entry only) [1]
14. Explain the accounting treatment of goodwill when new partner brings his share of goodwill in cash. (Write journal entry only). [1]

15. List any two items that need adjustments in the books of accounts of a firm at the time of admission of a partner. [1]
16. A and B are partners sharing profits in the ratio of 5:3 . C is admitted and new profit ratio is 4:3:2. What will be the Sacrificing Ratio? [1]
17. Can a retiring partner claim a share in subsequent profits of the firm? [1]
18. X, Y and Z are partners sharing profits in the ratio of  $\frac{2}{3} : \frac{1}{4} : \frac{1}{12}$  . Calculate new ratio if X died. [1]
19. A, B and C are partners sharing profits in the ratio of  $\frac{1}{2} : \frac{1}{3} : \frac{1}{6}$ . B died and his share is taken by A and C in the ratio of 5:3. Calculate new profit sharing ratio. [1]
20. What is partnership deed? [1]
21. Calculate the amount of Sports Material to be transferred to Income and Expenditure Account of a Sports Club for the year ended 30.03.2019. [3]

Sports Material Sold during the year.	Rs.
2018-19 (Book Value Rs. 50000	56000
Amount paid to Creditors for Sports Material	91000
Cash purchased of sports material	40000
Sports Material on 01.04.2018	50000
Sports Material on 31.03.2019	55000
Creditors for Sports Material on 01.04.2018	37000
Creditors for Sports Material on 31.03.2019	45000

22. A and B are partners sharing profits and losses in the ratio of 1:2. Their drawings were Rs. 20000 and Rs. 30000. Interest on drawings @ 6% p.a. was charged though there was no provision in their partnership deed. Rectify the above by means of adjusting entry. [3]

OR

A and B are partners in a firm sharing profits and losses in the ratio of 3:2. From 01.04.2019 they agreed to share profits and losses equally. Goodwill appear in the books Rs. 30000. Partners decide to show goodwill in the books even after change in profit sharing ratio. Pass necessary adjustment entry when goodwill is retained.

23. A , B and C are partners in a CA Firm sharing profits and losses in the ratio of 2:2:1. All the partners have agreed to the following terms -

- (i) C'S share of profits is guaranteed to be not less than Rs. 25000 p.a.
- (ii) A gives a guarantee to the effect that gross fee earned by him for the firm will not be less than Rs. 40000 p.a.

The profits earned by the firm for the year ended 31.03.2019 was Rs. 70000. The gross fee earned by A for the firm is just Rs. 30000. Prepare Profit and Loss Appropriation Account showing working clearly. [4]

OR

How will you calculate interest on drawing @ 12 % p.a. in each of the following cases:-

- (i) A partner withdrew Rs. 1000 pm on middle day of every month.
- (ii) A partner withdraw Rs. 10000 per quarter on 1<sup>st</sup> day of every quarter.
- (iii) A partner withdrew. Rs. 50000 during the year.
- (iv) A partner with drew Rs. 2000 p.m. on 1<sup>st</sup> day of every month.

24. From the following information Prepare Receipt and payment Account for the year ended. 31.03.2019. [4]

	Rs.
Opening Balance	
Cash in hand	25,000
Cash at Bank	3000
Subscription Received	
2017 - 18	2000
2018-19	70000
2019-20	4000
Furniture Purchased	35000
Donation	10,000
Tournament Fund Received	15000
Match Expenses	4500
Salaries and Wages	42300
Honorarium	2000
12% Investment Purchased	30000
Entrance Fees	2000
Interest on 12 % Investment	3000
Closing Balance	
Cash in hand	12000
Cash at Bank	?

25. A, B and C are partners sharing profits and losses in the ratio of 5:3:2. C retires from firm. After all necessary adjustments his capital account shows a net credit balance of Rs. 40000 on 01.04.2015. C is to be paid in four equal annual installments together with interest @ 10 % p.a. on the outstanding balances. Prepare C's Loan Account until he is paid the entire amount due to him. The firm closes its books on 31<sup>st</sup> March every year. [4]

26. A, B and C were partners in a firm sharing profits in the ratio of 3:3:2. Their capitals were A- Rs. 500000, B Rs. 400000 C Rs. 300000. They admitted D as a new partner for 1/5<sup>th</sup> share in the profits. D brought Rs. 400000 as his capital and necessary amount for goodwill premium. Their new profit sharing ratio will be 2:1:1:1.

Calculate the goodwill of the firm. Pass necessary journal entries for the above transactions on D's admission. [4]

27. A and B are partners sharing profits in the ratio of 1:2. Their capitals were Rs. 20000 and Rs. 30000. Interest on capital @ 6% p.a. was allowed, though there was no provision in their partnership deed. Rectify the above by means of an adjusting entry. [4]

28. Receipts and Payments Account for the year ending .  
31<sup>st</sup> March 2019

Receipts	Amount	Payments	Amount
To Balance b/d		By Computers (1.10.2018)	100000
Cash 30000			
Bank 24000	54000	By Office Expenses	29000
		By Electric Charges	15000
To sale Proceeds of old Newspaper	900	By postage and stationery	9000
To Locker's Rent	7000	By 10% Investments (1.12.2018)	60000
To Interest on Investments	1600	By Balance c/d	
To Entrance Fees	50000	Cash 35500	
To Life Membership Fees	100000	Bank 80000	115500
To Subscription	<u>115000</u>		<u>115500</u>
	<u>328500</u>		<u>328500</u>

Additional Information:-

- (i) Computers were to be depreciated @ 60% p.a. Furniture @ 10% p.a and Furniture on 01.04.2018 Rs. 40000
  - (ii) Electric charges outstanding Rs. 1000
- Prepare Income and Expenditure Account for the year ending 31.03.2019. [6]



29. A, B, and C are partner sharing profits in 2:3:1 ratio respectively Due to ill health C died on 30.09.2018. The Balance sheet of A, B and C on 31.03.2018 was as follow :-

Liabilities	Amount Rs.	Assets	Amount Rs.
A's Capital	100000	Cash	14000
B's Capital	200000	Bank	296000
C's Capital	300000	Stock	80000
Creditors	360000	Debtors	300000
Workmen Compensation Fund	20000	Investment	50000
Provision for Doubtful Debts	10000	Land	250000
	990000		990000

On C's death , the following was agreed upon:-

- (i) Goodwill is to be valued at two years' purchase of average profit or last three completed years profit for 2015-16 Rs. 45000, 2016-17 Rs. 90000, 2017-18 Rs. 135000.
- (ii) C's share of profits till the date of death will be calculated on the basis of average profits of last three years.
- (iii) Land was undervalued by Rs. 25000 and stock overvalued by Rs. 8000.
- (iv) Provision for doubtful debts is to be made at 5% of Debtors.
- (v) Claim of workmen compensation estimated at Rs. 5000. Prepare C's capital A/c to be presented to his executors. [6]

**OR**

A , B and C were partners in a firm sharing profits in the ratio of 2:2:1. The firm closes its books on 31<sup>st</sup> March every year on 31.12.2018 C died on that date his capital A/c showed a credit balance of Rs. 380000. Goodwill of the firm valued Rs. 120000. There was a debit balance of Rs. 50000 in profit and loss A/c. Profit from last balance sheet to the date of death is calculate Rs. 56250.

Pass necessary journal entries in the books of firm on C's death and prepare C's capital A/c.

30. A , B and C were partners in a firm sharing profits in the ratio of 3:2:1. Their Balance sheet as at 31.03.2019 was as follows:- [6]

Liabilities	Amount Rs.	Assets	Amount Rs.
Creditors	100000	Land	100000
Bills Payable	40000	Building	100000
General Research	60000	Plant	200000
A's Capital	200000	Stock	80000
B's Capital	100000	Debtors	60000
C's Capital	5000	Bank	10000
	350000		10000
	550000		550000

A, B and C decided to share the future profits equally w.e.f 01.04.2019. For this it was agreed that

- (i) Goodwill of the firm be valued at Rs. 30000.
- (ii) Land be revalued at Rs . 160000 and Building be depreciated by 6 %
- (iii) Creditors of Rs. 12000 were not likely to be claimed and hence be written back.

Prepare Revaluation Account, Partners Capital Account Balance sheet as at 01.04.2019.

31. A and B were partners in a firm sharing profits in the ratio of 3:2. The balance in their capital and Current Account as on 01.04.2018 were as follows:-

	A (Rs.)	B (Rs.)
Capital Accounts	300000	200000
Current Accounts	100000	28000 (Dr)

The partnership deed provided that A was to be paid a salary of Rs. 5000 p.m. whereas B was to be get a commission of Rs. 30000 for the year.

Interest on capital was to be allowed @ 8% p.a. whereas interest on drawings was to be charged @ 6% p.a. The drawings of A were Rs. 3000 at the beginning of each quarter while B withdrew Rs. 30000 on 01.09.2018. The net profit of the firm for the year before making the above adjustments was Rs. 120000.

Prepare Profit and Loss Appropriation Account, Partners Capital Account and Partner's current Account. [8]

OR

Pass journal entries in each of the following cases:-

- (i) Started business with cash by partners.
- (ii) Interest on partners' capital
- (iii) Drawings made by partners
- (iv) Interest on partners drawings
- (v) Salary payable to partner
- (vi) Commission Payable to partner
- (vii) Reserve created by the firm
- (viii) Profits of firm distributed among partners

32. A and B were partners in a firm sharing profits and losses in the ratio of 2:1. On 31<sup>st</sup> March 2019 their Balance sheet was follows:- [8]

Liabilities	Amount Rs.	Assets	Amount Rs.
A's Capital	140000	Plant and Machinery	175000
B's Capital	100000	Furniture and Fixtures	65000
Workmen Compensation	40000	Stock	47000
Fund		Debtors	110000
Creditors	160000	Less: Provision for Doubtful Debts	7000
	<u>440000</u>	Bank Balance	<u>50000</u>
			<u>440000</u>

On the above date C was admitted in the partnership firm A surrendered  $\frac{2}{5}$  th of his share of his share and B surrendered  $\frac{1}{5}$  th of his share in favour of C. It was agreed that :-

- (i) Plant and Machinery will be reduced by Rs. 35000 and Furniture and Fixtures will be reduced to Rs. 58500.
- (ii) Provision for bad and doubtful debts will be increased by Rs. 3000
- (iii) A claim for Rs. 16000 for workmen's compensation was admitted
- (iv) A liability of Rs. 2500 included in creditors is not likely to arise.
- (v) C will bring Rs. 42000 as his share of goodwill premium and proportionate capital.

Prepare Revaluation Account , Partners' Capital Account and Balance Sheet of the reconstituted firm.

OR

A, B and C were partners in a firm a sharing profits in the ratio of 5:3:2. On 31<sup>st</sup> March 2019 their Balance Sheet was as follow:-

Liabilities	Amount	Assets	Amount
Creditors	60000	Cash at Bank	140000
Employees' Provident Fund	40000	Sunday Debtors	160000
Profit and Loss A/c	100000	Stock	240000
A's Capital	300000	Investments	200000
B's Capital	250000	Fixed Assets	360000
C's Capital	<u>350000</u>		
	<u>1100000</u>		<u>1100000</u>

On the above date A retired and it was agreed that :-

- (i) Fixed Assets will be reduced to Rs. 290000
- (ii) A provision of 5% on debtors for bad and doubtful debts will be created.
- (iii) Stock was to be valued at Rs. 218000. A took over the stock at this value.
- (iv) Goodwill of the firm on A's retirement was valued at Rs. 800000. A's share of goodwill was treated by debiting B's and C's capital Accounts.
- (v) A was paid cash brought by B and C in such a way that their capitals become in profit sharing ratio and a balance of Rs. 58000 was left in the bank.
- (vi) B and C will share the future profits in the ratio of 2:3.

Prepare Revaluation Account, Partners' Capital Accounts and the Balance Sheet of the reconstituted firm.

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# DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI  
QUALIFYING EXAMINATION (2019-20)

Class:-XII  
Time- 3 Hrs.

Subject:-Economics  
M.M-80

## General Instructions:-

1. Question 1 to 4 and 13 to 16 are very short answer questions or MCQ carrying one mark each. They should be answered in one sentence.
2. Question number 5, 6, 17 and 18 are short answer questions. They should be answered in 60 words each. Each question carries 3 marks.
3. Question number 7 to 9 and 19 to 21 are also short questions carrying 4 marks each. They should be normally answered in 70 words each.
4. 10 to 12 and 22 to 24 are long answer questions carrying 6 marks each. They should be answered in 100 words each.
5. Marks of each question is indicated against it.
6. All parts of a question should be answered in one place.
7. Word limit is not applicable for numerical problems.

## Section - A

1. In a circular flow of income we have: [1]  
(a) Production      (b) Distribution      (c) Disposition      (d) All the above
2. Identify the item which is not a factor payment: [1]  
(a) Free uniforms to defence personnel  
(b) Salaries to the members of parliament  
(c) Imputed rent of an owner occupied a building  
(d) Scholarships given to the students of scheduled caste.

OR

Demand for final consumption arises in \_\_\_\_\_.

- (a) house hold sector only
- (b) government sector only
- (c) both household and government sector
- (d) neither in household nor in government sector

3. Calculate the legal reserve ratio if the initial deposit is Rs 200 crores lead to a creation of total deposit of Rs 1600 crores. [1]
4. From the following information find out the value of MPS: [1]

Y	S
0	-40
50	-20

- (a) 0.4                      (b) -0.4                      (c) 1.4                      (d) 00
5. Sale of Petrol and Diesel cars is rising particularly in big cities. Analyse its impact on GDP and Welfare. [3]
6. Differentiate between central bank and commercial bank. [3]

**OR**

Explain the currency authority function of central bank.

7. Write the precautions of income method in National Income Accounting. [4]
8. (a) Can the value of APS be one? Justify. [1]
- (b) With the help of a hypothetical table show the nature of APC and APS when there is increase in the level of income. [3]
9. The break-even level of income for an economy is given to be Rs 10,000 crores. If the economy saves 20 percent of the additional income, then calculate the value of:
- (i) autonomous consumption.      (ii) saving function
- (iii) level of income when saving is Rs 6,000 [4]

**OR**

The consumption curve makes an intercept of Rs 60 crores on the Y-axis. If MPC:MPS is 1:3, then derive the saving and consumption function. Also determine the level of income when savings become zero.

10. (a) Define aggregate demand. [1]
- (b) Derive the saving function from the consumption function. Write the steps of construction [5]
11. (a) Define High powered money. [1]
- (b) Explain how open market operation and margin requirements are used to control money supply in the economy. [5]

12. Calculate :-

(a)  $GNP_{MP}$  by Income Method

(b) National Income by Expenditure Method

	Rs in Crore	
(i) Wages and Salaries	380	
(ii) Net factor income from abroad	35	
(iii) Employee's contribution to social security	123	
(iv) Subsidies	5	
(v) Wages and salaries in kind	195	
(vi) Rent, Profit, Interest	445	
(vii) Indirect Tax	20	
(viii) Royalty	65	
(ix) Net Exports	40	
(x) Net domestic fixed capital formation	190	
(xi) Final consumption expenditure of private Non -profit institutions serving households	155	
(xii) Reduction in stocks	55	
(xiii) Employer's contribution to social security	80	
(xiv) Gross capital formation	235	
(xv) Household final consumption expenditure	380	
(xvi) Government final consumption expenditure	390	
(xvii) Mixed Income	115	[6]

**OR**

(a) Give 2 examples of people living in a country but not the normal resident of the country.

(b) How are the following treated in the calculation of national income. Give reasons for your answer.

- (i) Remittances from non-resident Indians to their families.
- (ii) Payment of interest on borrowing by General government.
- (iii) Expenditure on repair of fixed capital asset.
- (iv) Expenditure incurred by a firm on sponsoring a reality show. [2+4]

**Section - B**

13. The objective of self reliance means reducing dependence on: [1]

(a) foreign trade; (b) foreign aid; (c) foreign investment (d) All the above

14. India's jute industry suffered heavily due to \_\_\_\_\_ after partition: [1]

(a) Lack of raw materials (b) Famine (c) Earthquake (d) None of these

15. British introduced railways in India in the year. [1]  
(a) 1849 (b) 1850 (c) 1851 (d) 1852
16. The main source of foreign capital in India is: [1]  
(a) Loans from abroad (b) Foreign direct investment  
(c) Both (a) and (b) (d) Neither (a) nor (b)

**OR**

Define the term outsourcing.

17. Was disinvestment successful in India in 1990's? [3]

**OR**

Mention three negative impact of globalisation

18. "Indian economy was underdeveloped and stagnant during the British rule"- Justify. [3]
19. Explain how was the economic reforms affected the agricultural sector. [4]
20. Explain the "land ceiling" policy of the government at the time of independence. [4]  
Make an assessment of the same.

**OR**

Explain the ways by which the small scale industries were protected by the government during the planning period.

21. What do you mean by "drain of Indian wealth" during the colonial period. [4]  
Explain its effects on Indian Economy.
22. What do you mean by subsidy. Discuss the arguments in favour and against the grants of subsidies during the period of 1950 to 1990. [6]

**OR**

Mention three achievements for and three criticism against industrial and trade policy during 1950 to 1990.

23. Explain briefly the financial sector reforms under new economic policy. [6]
24. (a) Why is the year 1921 considered as a "year of great divide"?  
(b) Mention the year of first census in India.  
(c) Explain the demographic condition of India with various social development indicators during the British rule. [1+1+4=6]

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# DELHI PUBLIC SCHOOL

## SAIL TOWNSHIP, RANCHI QUALIFYING EXAMINATION (2019-20)

Class:-XII  
Time- 3 Hrs.

Subject:- Computer Science  
M.M.- 70

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- Q.1.** (a) What is the difference between interactive mode and script mode in Python? [1]
- (b) Python is a Free and Open Source language. What do you understand by this feature? [1]
- (c) What is the difference between a keyword and an identifier? [1]
- (d) What are nested lists? [1]
- (e) What are data types? What are Python's built-in core data types? [2]
- (f) If you are asked to label the Python loops as determinable or non-determinable, which label would you give to which loop? Justify your answer. [2]
- (g) How are lists different from strings when both are sequences? [2]
- (h) How can you say that a tuple is an ordered list of objects? [2]
- Q.2.** Differentiate between the following (with relevant programming examples): [2 x 2 = 4]
- (a) Tuples and Lists (b) append( ) and extend( )
- Q.3.** Convert the following: [0.5x4=2]
- (a)  $(11010110110111)_2 = (\dots\dots\dots)_{16}$  (b)  $(D92C)_{16} = (\dots\dots\dots)_2$
- (c)  $(EAFC)_{16} = (\dots\dots\dots)_8$  (d)  $(101000111)_2 = (\dots\dots\dots)_8$
- Q.4.** Add the binary numbers:
- (a) 110101 and 101111 (b) 10110 and 1101 [1x2 = 2]



**Q.5.** Find the outputs of the following program segments (Show the dry run process):

**[2 x 3 = 6]**

<pre>(a) y=str(123) x = "hello"*3 print(x,y) x= "hello" + "world" y = len(x) print(y,x)</pre>	<pre>(b) x=1 if x&gt;3:     if x&gt;4:         print("A", end = ' ')     else:         print("B", end = ' ') elif x&lt;2:     if(x!=0):         print("C", end = ' ') print("D")</pre>	<pre>(c) List1=[13,18,11,16, 13, 18, 13] print(List1.index(18)) print(List1.count(18)) List1.append(List1.count(13)) print(List1)</pre>
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**Q.6. (a)** Derive DeMorgan's Theorem algebraically.

[2]

(b) Draw the circuit diagram for the Boolean function  $F(X,Y,Z) = (X'+Y)(Y'+Z)$  using NOR gates only.

[2]

(c) Prove algebraically  $X.Y + X'.Z + Y.Z = X.Y + X'.Z$

[2]

**Q.7. (a)** What is the difference between Primary Key and Foreign Key? Give an example.

[2]

(b) What are views? How are they useful?

[2]

(c) Differentiate between DDL and DML commands.

[1]

**Q.8.** Write programs using nested loops to produce the following designs:

**[3 x 2 = 6]**

<pre>(a)      1         1 2        1 2 3       1 2 3 4</pre>	<pre>(b)      1         1 2 1        1 2 3 2 1       1 2 3 4 3 2 1</pre>
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**Q.9.** Write complete python programs for the following:

**[3 x 9 = 27]**

(a) To find minimum element from a list of element along with its index in the list.

(b) To search for an element in a given list of numbers.

(c) That reads a string and checks whether it is a palindrome string or not.

(d) That reads a string and then prints a string that capitalizes every other letter in the string e.g, passion becomes pAsSiOn.

(e) To check whether the number entered is an Armstrong number or not.

(f) Using while loop to read the numbers until -1 is encountered. Also, count the number of prime numbers and composite numbers entered by the user.

(g) To generate the sum of the following series:

$$1/1^2 + 1/2^2 + \dots + 1/n^2.$$

(h) To enter a number and then calculate the sum of its digits.

(i) To find largest among three integers.

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**DELHI PUBLIC SCHOOL**  
**SAIL TOWNSHIP, RANCHI**  
**QUALIFYING EXAMINATION (2019-20)**

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- Physical Education**  
**M.M.- 70**

**General Instructions:-**

1. The question paper consists of 26 questions.
2. Answer to question 1-11 carrying 1 mark should be in approximately 20-30 words.
3. Answer to question 12-19 carrying 3 marks should be in approximately 80- 100 words.
4. Answer to question 20-26 carrying 5 marks should be in approximately 150-200 words.

1. What is 'seeding'? [1]
2. List the sub-components of strength. [1]

**OR**

We know that planning is necessary for making a sports programme a success. Give the reason for this in own sentence.

3. Give two objectives of Extramural Activities . [1]
4. Which method will you suggest to develop speed? [1]
5. State what you understand by the term 'static strength'. [1]
6. Name any two non-nutritive components of diet. [1]
7. Define coordinative ability. [1]

**OR**

What is a Bye?

8. Write three differences between Intramural and Extramural. [1]
9. What does the term 'Fartlek' mean and who developed this training method? [1]
10. Give two examples each of macro-nutrients and micro-nutrients required by our body. [1]
11. What is the difference between a single league and a double league tournament? [1]
12. Describe six benefits of a 'Health Run'. [3]

**OR**

Differentiate between 'passive flexibility' and active flexibility'.

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

14. Discuss the pre, during and post game responsibilities of officials of various committees. [3]
15. What do you understand by food myths?

**OR**

Explain the types of Endurance according to the Nature of Activity.

16. Differentiate between 1:1 and 1:2 ratio interval training, with suitable examples. [3]
17. State the difference between reaction ability and balance ability. [3]
18. Draw a fixture of 7 teams using round robin method. [3]
19. Write the procedure of giving byes. [3]
20. What do you mean by knock-out tournament? Discuss the advantages and disadvantages of Knock-out tournament. [5]
21. Explain nutritive components of diet. [5]
22. Write a detailed note on circuit training . [5]
23. Explain the methods to develop endurance. [5]
24. What is the meaning of Tournament? Draw knock-out fixture for 21 teams. [5]
25. What do you mean by specific sports programme? Explain. [5]
26. Elaborate the methods of improving flexibility. [5]

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**DELHI PUBLIC SCHOOL**  
**SAIL TOWNSHIP, RANCHI**  
**QUALIFYING EXAMINATION (2019-20)**

**Class:-XII**  
**Time- 3 Hrs.**

**Subject:- Engineering Graphics**  
**M.M.- 70**

**General Instructions: -**

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

I. Answer the following multiple questions. Print the correct choice on your drawing sheets. [1x5=5]

(i) The truncated portion of a pyramid is called

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

(ii) In case of B.S.W thread

(a)  $D = 0.64 P$                       (b)  $D = 0.96 P$                       (c)  $D = 0.86 P$                       (d) None

(iii) In case of thread portion in bolt is

(a)  $2D$                       (b)  $2D + 10$                       (c)  $2D + 6$                       (d) None

(iv) Which one is not sectioned?

(a) cone                      (b) sphere                      (c) bolt                      (d) none

(v) Material of shaft is

(a) G.I.                      (b) C.I.                      (c) MS                      (d) None

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

(b) A pentagonal pyramid of base side 30 mm, height 60 mm, base side parallel to the V.P. It is resting on the ground of its base. Axis is vertical. Give all the dimensions.

Show the direction from viewing. Draw the isometric projections. [7]

(c) A hexagonal prism of base side 30 mm, height 50 mm, base side parallel to the V.P. It is resting on the ground of its base. A hemi-sphere of 40 mm diameter is centrally placed on the top of hexagonal prism of its base. Common axis is vertical. Draw the isometric projection. Give all the dimensions. Show the direction from viewing. [13]

3. (a) Draw to scale 1:1 , the standard profile of a B.S.W. thread , taking enlarged pitch is 40 mm. Give the standard dimension. [8]

OR

Draw to scale 1:1, the front view and side view of square Headed Bolt of diameter 20 mm. keeping the axis parallel to H.P. and V.P. Give the standard dimensions.

- (b) Sketch freehand the front view and top view of a Pan Head Rivet of diameter 20 mm. Keeping the axis vertical. Give the standard dimensions. [5]

OR

Sketch freehand the front view and top view of round head screw of diameter 20 mm. Axis perpendicular to the H.P. Give the standard dimensions.

4. Fig - I , show the details of parts of a 'Turn Buckle'. Assemble these parts correctly and then draw the following views to scale 1:1.

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

(ii) Right side view [8]

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

OR

Fig-2, Show the assembly of Bushed Bearing. Disassemble the parts and then draw to scale 1:1, the following views keep the same position of both, Body and Bush.

(i) BODY :

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

(b) Top view [7]

(ii) BUSH

(a) Front view Right half in section [4]

(b) Top view [3]

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