DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2018-19)

Class:-XI   Subject:- English

Time- 3 Hrs.   M.M.-80

General Instructions:-

  i.   *This paper is divided into three sections: A,B&C.*
  ii.   *All the sections are compulsory.*
  iii. *Read the instructions very carefully and follow them faithfully.*
  iv.   *Do not exceed the prescribed word limit while answering the questions.*

Section-A (Reading)   [20]

1.   Read the passage carefully and answer the questions that follow.   [12]

1. Spare the rod, but in its place, insist on an undertaking of child's good behavior from the parents. This is what private schools in Kerala are now doing. The institutions are asking parents to put their signature on a code of good conduct which promises that their children will maintain discipline in school. This is the school's attempt at keeping order at a time when caning and other forms of physical punishment have been banned by the Centre.

2. "We are making parents sign a code of good behaviour. It is an alternative to corporal punishment. Children have to abide by the rules set by schools till the time they are in uniform. It acts as a deterrent, as parents play an important role in the education of their children by supporting the school staff in maintaining a good learning environment for all students," says TPM Ibrahim Khan, President of the Kerala CBSE School Management Association.

3. The ministry of women and child development issued guidelines banning physical punishment of students in 2010. A first violation could lead to up to one year in jail or fine of Rs.50000 or both. For subsequent violations, imprisonment could extend to three years with an additional fine of Rs. 25000. The ministry guidelines put the onus of preventing corporal punishment on the heads of schools. Teachers found guilty of imposing physical penalties could be denied promotion and increments. But there is no statutory definition of corporal punishment. The Right to Education Act, 2009, merely states: "No child shall be subjected to physical punishment or mental harassment."

4. "School is a place where the transformation of a child takes place and the grooming of children is the joint effort of the school and parents. Also, parents are now keenly interested in their children's development and behaviour. It helps both parties and children benefit," says NM George, Principal of Toc H Public School in Ernakulam.

5. Parents are made to sign the bond either at the time of their ward joining school or every year at the annual parent-teacher meet or during open house. In it, they are asked to ensure that their children don't disrupt school or violate its rules. They have to promise that their children will not damage or steal school property, assault fellow students, rise up in insubordination, indulge in any disgraceful act, use obscene language or possess dangerous weapons, tobacco, narcotic drugs and alcohol. The students must stick to a proper dress code in school and are prohibited from using cell phones inside the institution or in school buses.

6. Repeated violations of the code by children may lead to immediate suspension, expulsion or permanent exclusion from the school. "This document comes in handy if the school authorities have to take harsh steps against a student for misbehaving in school," says K Unnikrishnan, President of the Confederation of Kerala Sahodaya Complexes. A Sahodaya school complex is a group of neighbourhood CBSE school that share innovative education practices.

7. Psychiatrists, though, do not endorse the idea and believe that both corporal punishment and getting parents to endorse a code of good conduct are signs of laziness. They say these are shortcuts that schools adopt instead of identifying a child's real problem and working to correct it. "Discipline is a dedicated and committed mission and it should be the joint effort of the teacher and parent. By putting the onus on parents for their child breaking rules, schools are indulging in blame-games," says Dr. CJ John, a psychiatrist.

8. Though corporal punishment is banned in schools, it usually exists in one form or the other. The Kerala government has in the past issued a circular banning corporal punishment using class representatives and monitors.

9. Making it clear that no class should remain without a teacher, the state has asked schools to stop "the system of using monitors and leaders for preparing the list of students and punishing them in the absence of a teacher in the class."

10. "We want to ensure that schools don't indulge in corporal punishment in any form and therefore issued the circular," says the Director of Public Instruction, A Shahjahan.

Questions

(a) **On the basis of your reading of the passage, answer the following questions by choosing the correct option.** [1x6=6]

    (i) What are the private schools of Kerala now doing to maintain discipline?

        (a) They are giving corporal punishment to the children.

        (b) They are making them stand outside the classroom.

        (c) The institutions are asking parents to sign a code of good conduct or behaviour of the child.

        (d) They are rewarding the children for their good behavior.

    (ii) How do parents play an important role in the education of their children?

        (a) By supporting the staff in maintaining a good learning environment for all students.

        (b) By taking their children to picnic and outings.

(c) By giving them friendly support.

(d) By giving their wards required punishment.

(iii) The violation of the guidelines issued by the Ministry of Women and Child Development includes the punishment of

(a) one year in jail or fine of Rs. 50000 or both.

(b) six months of jail with a fine of Rs. 50000

(c) three years of jail with a fine of Rs. 50000

(d) No punishment is given

(iv) The bond which parents sign with school includes which of the following?

(a) The child will indulge in no disgraceful act.

(b) The child will not possess a cell phone

(c) The child will give an application for absence due to illness.

(d) All of the above

(v) The circular that the Kerala Government has issued in the past includes that

(a) corporal punishment should be given.

(b) the system of using monitors and leaders for preparing the list of students and punishing them in the absence of a teacher should be followed.

(c) no class should remain without a teacher

(d) All of the above

(vi) Which of the following is supported by psychiatrist?

(a) Schools should not indulge in blame-games.

(b) Asking parents to sign a bond of their children's good conduct is a sign of the schools not doing their job.

(c) Corporal punishment is adopted as a shortcut method by work-shy teachers for correcting problems of children.

(d) All of the above

(b) **On the basis of your reading of the passage, answer the following questions briefly.**

(i) What is the role of the school, as per the Principal of Toc H Public School?   [1]

(ii) What system of corporal punishment is employed by schools in Kerala to circumvent the ban order from the Centre?   [1]

(iii) What synonym of the word 'break' is used in para 5?   [1]

(iv) What antonym of the word 'preservation' is used in para 4?   [1]

(v) What synonym of the word 'physical' is used in para 2?   [1]

(vi) What antonym of the word 'apathetic' is used in para 7?   [1]

2. **Read the following passage carefully and answer the questions that follow.**   **[8]**

1. The dictionary meaning of a robot is that it is an automatic apparatus or device that performs functions ordinarily ascribed to human beings or operates with what appears to be almost human intelligence.

2. The Robot Institute of America, which is an association of several robot manufactures, gives the following definition of an industrial robot (an industrial robot is a robot that is used in industries or manufacturing concerns): an industrial robot is a reprogrammable, multifunctional manipulator designed to move material, parts, tools or specialised devices through variable programmed motions for the performance of a variety of tasks.

3. The keyword in this definition is 'reprogrammable'. This means that a robot is capable of being reprogrammed. This feature is the one that distinguishes it from fixed automation. Because of the flexibility offered by robots, manufacturing systems which use robots are called Flexible Manufacturing Systems (FMS)

4. Karel Capek was responsible for introducing the word robot. Sir Isaac Asimov is the one who coined the word robotics. According to Asimov, robotics is the science of dealing with robots. Hence robotics involves a scientific study of robots. The study includes design, selection of materials of proper quality for the components, fabrication, the study of various motors required for moving the components, design of electronic circuits, computers and computer programming and control of robots. Since robots and robotics are still in the developing stage, a considerable amount of research is required and is being pursued.

   Robotics involves various disciplines- mechanical engineering, material science, electronics, computer science, computer engineering, and control systems, to name just a few. Depending on the area in which robots are to be used, robotics includes disciplines such as biology, medical science, psychology, agriculture mining, outer space engineering etc. Governments are funding research and development projects in the area of robotics.

5. Basically, there are two types of robots fixed and mobile. A fixed robot is attached to a stationary platform. A fixed robot is analogous to a human standing or sitting in one fixed location while doing his work with his hands. A mobile robot moves from place to place. Mobility is given to robots by providing wheels or legs or other crawling mechanism.

   A mobile robot can be given a human shape but the actual shape has nothing to do with the actual functions of the robot. Wheeled locomotion is good for smooth terrains. For rugged terrain, legged locomotion is preferable. A mobile robot should have at least three wheels or legs for stability.

   Questions

   (a) On the basis of your reading of the above passage make notes on it, using headings and sub-headings. Also use recognizable abbreviations, wherever necessary (minimum 4). Supply an appropriate title to it.   [5]

   (b) Write a summary of the above passage in about 80-100 words.   [3]

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

3.   (a) You are the General Manger of a reputed company. The company requires posh bungalows on company lease as guest houses. Draft an advertisement under the classified columns to be published in a leading daily in about 50 words.   [4]

OR

(b) Manav is a student of class XI of AB Public School. He has lost his hall ticket for the annual examinations. He wants to put up a notice on the school notice board. Draft a notice on his behalf in about 50 words.

4. (a) You are Rupa/Ranjit, living in Lucknow, while going through a magazine, you come across an article, your heart goes out to the hundreds of destitute children who are denied the pleasures of life. You decide to sponser one child. Choose your opinions and mode of payment and write a letter in about 120 -150 words to the Manager, World Vision, Kodambakkam , Chennai telling him about your decision to sponser a child.   [6]

OR

(b) Making a career choice is a very difficult choice that every student is confronted with. Unfortunately, our institutions are in a dearth of educational councilors who can guide the children. Write a letter to the editor in about 120-150 words of a national daily about the persistent problem, suggesting ways to improve it.

5. (a) You are Chandan / Chandini , a student of class XI of Sarvodaya School, Kailash colony, you feel disturbed to read news about increasing cases of honour-killing in Northern India. You feel that such attitude of some elders in the society deprives children of their free will and pose hindrance in choosing life partner and career of their choice. Write an article in about 150-200 words on the topic, "Honour killing –A stigma on a Modern Society".   [10]

OR

(b) Your school recognises the academic excellence of the students by giving them certificates and medals on the Recognition Day. Parents are invited and a cultural programme is organised. The highlight of the day is the Principal's address. Write a report for publication in your school magazine describing the event in about 150-200 words. Sign your report as Kabir/Kanchan.

6. **The following passage has not been edited. There is one error in the lines indicated. Write the incorrect word and the correction in your answer sheet.**   **[½x8=4]**

	Incorrect	Correct
All life on earth can ultimately is	is	be
traced back on the sea. Creatures	(a)………	……….
with limbs or fingers rather than	(b)………	……….
fins has evolved from fishes	(c)………	……….
about 335 million years before	(d)………	……….
which remain a mystery. The new	(e)………	……….
fossil find in a rock formation near Scotland	(f)………	……….
provides one of the few clue to what has been	(g)………	……….
happening on these 30 million years.	(h)………	……….

7. **Re-arrange the following words/phrases to make meaningful sentences.**   **[1x3=3]**
(a) a zig-zag way/ brook / forms / one can / flows / full of life / in / find it/ and / the
(b) is comparatively / in the plain / brook's movement / slow and silent/ lands /the
(c) in various / brook's / movements / water / types of moves / the

8.   **Correct the following sentences:-**   **[1x3=3]**

1. She was leaning at the chair.
2. A drowning man catches a straw.
3. No sooner I reached the station, when the train started.

Section-C (Literature)   **[30]**

9.   **Read the extracts given below and answer the questions that follow.**   **[1x3=3]**

Father and Son, we both must live

On the same globe and the same land,

He speaks: I cannot understand

Myself, why anger grows from grief,

We each put out an empty hand,

Longing for something to forgive.

(i)   What is the cause for the father's trouble?
(ii)   What does he realise here?
(iii)   How is reconciliation between father and son possible.

OR

The king heard this. The king saw red.
In fact he nearly lost his head;

But being a just and placed king
He said, 'This is a tricky thing.

I need some counsel, Bring to me
The wisest man in this country.

(i)   Was the king 'just and placid'? Give one reason.
(ii)   Why did the architect blame the king?
(iii)   Who was the wisest man? What advice did he give?

10.   **Answer any <u>three</u> of the following questions in 30-40 words each.**   **[3x3=9]**

(a) 'Shahid was legendary for his prowess in The kitchen' Explain the statement briefly.

(b) On reading the play 'The Browning Version'. What opinion do you form of Frank,

   the young science master.

(c)What kind of India did Gaitonde find in the pages of History books he read?
   Describe briefly.

(d)Who was Doctor Ernst Weil? Why did Albert go to meet him? Was the meeting successful?

   Give reasons in support of your answer.

11.	**Answer any <u>one</u> of the following questions in 120-150 words.**	**[6x1=6]**

Dr. Andrew was successful in his endeavour because he was sensitive to the feelings of others. Describe his feelings during the entire process.

<div align="center">

OR

</div>

Justify the title the 'Mother's Day'. What lesson do you learn from the play 'Mother's Day?

12.	**Answer any <u>one</u> of the following questions in 120-150 words.**	**[6x1=6]**

As a Buddhist, he told me, he knew that it didn't really matter if I passed away, but he thought it would be bad for business. Comment.

<div align="center">

OR

</div>

Nani Palkhiwala in his essay says that "Laws are never respected nor enforced in India"? What could be the possible reasons for such a comment? Discuss some ways to improve this situation.

13.	**Answer any <u>one</u> of the following questions in 120-150 words.**	**[6x1=6]**

What human values did Mrs. S. possess, unlike Mrs. Dorling? Explain with the reference to the

chapter. 'The Address.'

<div align="center">

OR

</div>

Markus Natten, though showing disapproval regarding the behaviour of adults, also raises a very important point, that of independent thinking and individuality. Do you agree that independent thinking & individuality make us what we are? Elaborate in the context of the poem 'childhood'.

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2018-19)

Class:-XI   **Subject:- Mathematics**

Time- 3 Hrs.   **M.M.-100**

General Instructions:-

All questions are compulsory.

i.   Put the question number against each answer.

ii. Question paper is comprised of four sections A, B, C and D.

iii. Section- A carries 4 questions of one mark each. Section-B carries 8 questions of two marks each. Section-C carries 11 questions of four marks each. Section-D carries 6 questions of six marks each.

iv. However, internal choice has been provided in some questions. Use of calculator is not permitted. You may ask for log table if required.

Section - A

1. Write the value of k for which the equation

    $kx^2 + (2k - 3) y^2 - 4x + 6y - 1 = 0$ represents a circle.

2. Write the contrapositive and converse of the following statement:-

    If a triangle is equilateral then it is isosceles.

3. Find all possible values of a, if $\displaystyle \lim_{x \to 0} \frac{x^9 - a^9}{x-a} = \lim_{x \to 5} (x+4)$

4. If S be the sample space and 3P(A) = P(B) and S=A∪B where A and B are two mutually exclusive events write the value of P(A).

    OR

    A and B are two mutually exclusive events of an experiment. If $P(\overline{A})$ = 0.65, P (A∪B) = 0, P (B) = x, find the value of x.

Section – B

5. In a survey of 60 people it was found that 25 people read newspaper H, 26 real newspaper T, 26 read newspaper I, 9 read both H and I, 11 read both H&T, 8 read both T&I, 3 read all newspapers. Use Venn diagram to find the number of people who read at least one of the newspapers and the number of people who read exactly one newspaper.

6. Find the domain and range of the function:-
    $\left\{ \left(x, \frac{1}{1-x^2} \right) : x \in R, \ x \neq \pm 1 \right\}$

    OR

    Find the domain and range of the function:- f(x) = 1- |x-3|

    Pg-1

7. Solve the quadratic equation:-
$x^2 - (3\sqrt{2} + 2i) x + 6\sqrt{2} i = 0$

8. Find the equation of the hyperbola, the length of whose latus rectum is 8, eccentricity is $\frac{3}{\sqrt{5}}$ and whose transverse and conjugate axes are along the X and Y- axes respectively.

OR

Find the equation of circle touching y axis at the point (0,3) and making an intercept of length 8 units an x on axis.

9. Two vertices of a triangle are A (3,4,2) and B (1,3,2). The medians of the triangle intersect at (2,4,3), find the remaining vertex C of the triangle.

10. Find the derivative of x cos x by the first principle.

OR

If $y = \sqrt{\frac{a}{x}} + \sqrt{\frac{x}{a}}$ then prove that $2xy \frac{dy}{dx} = \frac{x}{a} - \frac{a}{x}$

11. In how many distinct ways can the product xy^2z^2 be written without using exponents?

12. Three coins are tossed. Describe
(a) Two events which are mutually exclusive but not exhaustive.
(b) Three events which are mutually exclusive and exhaustive.

Section – C

13. Find the 6th term in the expansion of $\{y^{1/2} + x^{1/3}\}^n$ if the bionomial coefficient of the third term from the end is 45.

14. If $\frac{3}{2+\cos\theta+ i \sin\theta}$ = a+ ib then prove that $a^2 + b^2 = 4a - 3$.

15. Find the value of 'n' such that

$\frac{a^{n+1}+ b^{n+1}}{a^n+b^n}$ is the geometric mean between 'a' and 'b'.

OR

Show that in an infinite G.P. having common ratio r, 0<r<1, any term is greater than the sum of all the succeeding terms if r<$\frac{1}{2}$.

16. Find the standard deviation of the first n natural numbers.

17. Prove that the locus of the mid points of the portion of the line x cos α + y sin α = p intercepted between the axes is $4x^2y^2 = p^2 (x^2+y^2)$

OR

If the image of the point (x_1y_1) with respect to the mirror line ax + by +c = 0 be (x_2 ,y_2) then show that

$$\frac{x_2 - x_1}{a} = \frac{y_2 - y_1}{b} = - \frac{2 (ax_1+ by_1+c)}{a^2+b^2}$$

Pg-2

18. Solve the following linear inequalities graphically:-

$x+y \leq 6, \quad x+y \geq 4$

19. Evaluate :- $\lim\limits_{x \to 0} f(x)$, where $f(x) = \begin{cases} \dfrac{|x|}{x} & ,x \neq 0 \\ 0, & x = 0 \end{cases}$

20. Find the point which is equidistant from points $0(0,0,0)$, A $(a,0,0)$, B$(0,b,0)$ and C$(0,0,c)$.

21. Solve the equation:-

$\sin x + \sqrt{3} \cos x = 2$

22. An arch is in the form of a semi ellipse. It is 8 m wide and 2m high at the centre. Find the height of the arch at a point 1.5 m from one end.

23. A committee of 7 has to be formed from 9 boys and 4 girls. In how many ways can this be done when the committee consists of (i) at least 3 girls (ii) at most 3 girls.

Section – D

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

OR

The sum and sum of squares corresponding to length x(in cm) and weight y (in gms) of 50 plants are given below:-

$\sum_{i=1}^{50} x_i = 212$, $\sum_{i=1}^{50} x_i^2 = 902.8$, $\sum_{i=1}^{50} y_i = 261$, $\sum_{i=1}^{50} y_i^2 = 1457.6$

Which is more varying, the length or weight?

25. The cable of a uniformly loaded suspension bridge hangs in the form of a parabola. The roadway which is horizontal and 100 m long is supported by vertical wires attached to the cable, the longest wire being 30 m and the shortest being 6m. Find the length of a supporting wire attached to the roadway 18m from the middle.

OR

A rod AB of length 15 cm rests in between two coordinate axes in such a way that the end point A lies on x-axis and the end point B lies on y axis. A point P(h,k) is taken on the rod in such a way that AP = 6 cm. Show that the locus of P is an ellipse.

26. If a_1 , a_2 , a_3 ……….., a_n are in AP with common difference d≠0 then prove that

sin d { cosec a_1 cosec a_2 + cosec a_2 cosec a_3 + cosec a_3 cosec a_4 + ……………. +

cosec a_{n-1} cosec a_n } = cot a_1 – cot a_n

OR

Find the sum to x terms of the series

$1 - \dfrac{4}{2} + \dfrac{7}{2^2} - \dfrac{10}{2^3} + \ldots\ldots\ldots\ldots\ldots$

Pg-3

27. (i) If $y = \sqrt{\dfrac{1-x}{1+x}}$ then prove that $(1-x^2)\,\dfrac{dy}{dx} + y = 0$

(ii) If $y = \dfrac{x}{\sin^n x}$ then prove that $\dfrac{dy}{dx} = \dfrac{\sin x - n\cos x}{\sin^{n+1} x}$

28. Using principle of mathematical induction

Prove that $(1+x)^n \geq 1 + nx \ \forall\, n \in N.$

29. In Δ ABC if $\dfrac{\tan A - \tan B}{\tan A + \tan B} = \dfrac{c-b}{c}$ then prove that $\angle A = 60^\circ$

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2018-19)

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

General Instructions:-

i. *All questions are compulsory. There are 27 questions in all.*

ii. *This question paper has 4 sections: Section A, Section B, Section C and Section D.*

iii. *Section A has five questions of 1 mark each*

Section B has seven questions of 2 marks each.

Section C has twelve questions of 3 marks each.

Section D has three questions of 5 marks each.

iv. *There is no overall choice. However internal choices have been provided in two questions of 1 mark, two questions of 2 marks, four questions of 3 marks and three questions of 5 marks weightage. You have to attempt only one of the choices in such questions.*

Section-A

1. A spring having a force constant k is divided into three equal parts. What would be the force constant for each individual part?

2. In a given process on an ideal gas, dw=0 and dq<0. What happens to the temperature of the gas?

OR

Is the efficiency of a heat engine more in hilly areas than in the plains? Justify your answer.

3. If the speed of a motor car is doubled, how much more distance will it cover before stopping, under the same retarding force?

4. The sum and difference of two vectors are perpendicular to each other. What is the relation between the two vectors?

OR

A body is projected with velocity u at an angle θ to the horizontal to have maximum horizontal range. What is its velocity at the highest point?

5. Find the dimensions of (a/b) in the equation:
$$P = \frac{a - t^2}{bx}$$
Where p is pressure, x is distance and t is time.

Section-B

6. The relation between time t and distance x is $t = ax^2 + bx$, where a and b are constants. Express the instantaneous acceleration in terms of instantaneous velocity.

OR

Points P, Q and R are in vertical line such that PQ=QR. A ball at P is allowed to fall freely. What is the ratio of the time of descent through PQ and QR?

7. Find the component of $\vec{a} = 2\,\hat{\imath} + 3\,\hat{\jmath}$ along the direction $\hat{\imath} + \hat{\jmath}$.

8. Establish the relation between torque and angular acceleration. Hence define moment of Inertia.

9. Two wires of diameter 0.25 cm, one made of steel and

   other made of brass are loaded as shown in the figure.

   The unloaded length of steel wire is 1.5 m and that of

   brass wire is 1m. Young's modulus of steel is 2×10^{11} Pa

   and that of brass is 0.91×10^{11} Pa. Calculate the elongations

   of steel and brass wire (1 Pa = $1 \text{N}/m^2$)

10. A physical quantity X is given by X = $\frac{a^2\,b^3}{c\sqrt{d}}$. If the percentage errors of measurement

    in a, b, c and d are 4%, 2% , 3 % and 2 % respectively, then calculate the percentage error in

    X.

11. A particle of mass 0.5 kg travels in a straight line with velocity v= $ax^{3/2}$ where

    a = 5 $m^{-1/2}\, s^{-1}$. What is the work done by the net force during its displacement from x=0

    to x=2m.

OR

A molecule in a gas container hits a horizontal wall, with speed of 200m/s at an angle 30° with the normal and rebounds with the same speed. Is momentum conserved in the collision? Is the collision elastic or inelastic?

12. Draw graphs showing the variation of acceleration due to gravity with (i) height above the earth's surface and (ii) depth below the earth's surface.

Section-C

13. A train standing at the outer signal of a railway station blows a whistle of frequency 400 Hz in still air.
    (i) What is the frequency of the whistle for a stationary observer on the platform when the train (a) approaches the platform with a speed of 10m/s. (b) recedes from the platform with a speed of 10m/s.
    (ii) What is the speed of sound in each case?
        (Speed of sound in still air = 340 m/s)

14. Define escape velocity. Obtain an expression for the escape velocity of a body from the surface of the earth.

15. From a circular disc of radius R and mass 9M, a small disc of radius R/3 is removed from the disc, as shown below. Find the moment of inertia of the remaining disc about an axis perpendicular to the plane of the disc and passing through the point O.

OR

From a thin uniform disc of radius R, a circular hole of radius R/2 is cut out. The centre of the hole is at R/2 from the centre of the original disc. Locate the centre of gravity of the remaining disc.

16. Derive an expression for the excess pressure inside a liquid drop.
What will be the excess pressure inside an air bubble of radius R lies at a depth h below free surface of a liquid of density ρ and surface tension σ.

OR

Derive an expression for the terminal velocity of a small spherical body falling through a viscous medium.

Why bigger rain drops fall with a larger velocity compared to the smaller rain drops.

17. A projectile can have the same range R for two angles of projection. If t_1 and t_2 be the time of flight in the two cases, then prove that $t_1\, t_2 = \dfrac{2R}{g}$

Why does a tennis ball bounce higher on hills than in plains?

OR

A projectile is fired at an angle θ with the horizontal with velocity u. Show that its trajectory is a parabola. Also obtain expression for time of flight and horizontal range.

18. (i) Rain is falling vertically with a speed of 30 m/s. A woman rides a bicycle with a speed of 10 m/s in the north to south direction. What is the relative velocity of rain with respect to the woman? What is the direction in which she should hold her umbrella to protect herself from the rain?
    (ii)   The displacement of a body is given to be proportional to the cube of time elapsed. What is the nature of the acceleration of the body.

19. The rate of volume flow (V) of a liquid through a tube depends upon radius (r) of the tube, length (l) of the tube, pressure difference (p) across its ends, and coefficient of viscosity (η) . Derive an expression for the rate of flow of a liquid through the tube.

Pg-3

20. Three blocks of masses 2 kg, 4 kg and 6 kg
   are connected to a light string as shown in the figure.
   The string passes over a frictionless pulley.
   Find (i) acceleration of the system (a), (ii) tensions
   T_1 & T_2. (Take g = 10 m/s^2)

OR

Two blocks of mass 2 kg and 5 kg are connected by an ideal string passing over a pulley.
The block of mass 2 kg is free to slide on a surface inclined at an angle of 30° with the
horizontal whereas 5 kg block hangs freely. Find the acceleration of the system and the
tension in the string. (Given μ = 0.30 , Take g=10 m/s^2)

21. Derive the relation between α *and* β , where the symbols have their usual meanings. Also
   give SI units of α *and* β .

22. What is a heat engine? Explain its working principle. Define efficiency.

23. A mass M is suspended from a spring of negligible mass. The spring in pulled a little and
   then released so that the mass executes SHM of time period T. If the mass is increased by
   m, the time period becomes 5 T/3. What is the value of m/M?

24. Define the term orbital speed. Derive expression for orbital speed of a satellite orbiting very
   close to the surface of the earth. Find the ratio of this orbital speed with escape speed.

Section-D

25. What are stationary waves? Discuss analytically how stationary waves are formed in
   stretched strings. Deduce expression for the frequencies in the various modes of vibrations.

OR

(i)   Show that for small oscillations, the motion of a simple pendulum is simple
        harmonic. Derive an expression for its time period.

(ii)   Two simple harmonic motions are represented by the equations.

x_1 = 5 sin (2 πt + π/4) , x_2 = 5 $\sqrt{2}$ (sin 2 πt + cos 2πt)

What is the ratio of their amplitude?

26. State and prove Bernoulli's Theorem.

Water enters a horizontal pipe of non-uniform cross-section with a velocity of 0.6 m/s and leaves the other end with a velocity of 0.4 m/s. At the first end, the pressure of water is 1200 N/m^2 . Calculate the pressure at the other end. Density of water is 1000 kg/m^3.

OR

Derive an expression for the rise of liquid in a capillary tube and show that the height of the liquid column supported is inversely proportional to the radius of the tube. What happens when the length of a capillary tube is less than the height up to which the liquid may rise in it?

Water flows through a horizontal pipe whose internal diameter is 2 cm, at a speed of 1m/s. What should be the diameter of the nozzle, if the water is to emerge at a speed of 4m/s?

27. Define elastic collision. Derive expressions for the final velocities of two bodies undergoing elastic collision in one dimension.
Find the final velocities when a light body collides against a massive stationary body.

OR

State work –energy theorem and derive it.
A particle of mass m moves in a straight line with retardation proportional to its displacement x . Find the expression for loss of kinetic energy for any displacement x.

DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2018-19)

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

General Instructions:-

1. All questions are compulsory.
2. Question No. 1 to 5 are very short answer question and carry 1 mark each.
3. Question No. 6-12 are short answer questions and carry 2 marks each.
4. Question No. 13 to 24 are also short answer questions and carry 3 marks each.
5. Question No. 25 to 27 are long answer questions and carry 5 marks each.
6. Use log table if necessary. Use of calculators is not allowed.

1. 45.4 L of dinitrogen reacted with 22.7 L of dioxygen and 45.4 L nitrous oxide was formed. The reaction is given below

    $2N_2 (g) + O_2 (g) \rightarrow 2N_2O (g)$

    Which Law is being obeyed in this experiment? [1]

2. Write the SI definition of Mole. [1]

3. Predict the position of the element in the periodic table satisfying the configuration $(n-1) d^1 ns^2$ for n = 4. [1]

4. What is the effect of the following ionisation process on the bond order of C_2?

    $$C_2 \longrightarrow C_2^+ + e^-$$ [1]

5. For a reaction both ΔH & ΔS are positive under what condition will the reaction occur spontaneously? [1]

6. The density of 3M Solution of NaCl is 1.25 gm/ml. Calculate the molality of the solution. [2]

7. The velocity associated with a proton moving with a potential difference of 1000 V is 4.37×10^5 m/s. If the hokey ball of mass 0.1 kg is moving with this velocity. Calculate the wavelength associated with this velocity. [2]

8. Explain the formation of H_2 molecule on the basis of valence bond theory. [2]

9. (i) Conjugate acid of weak base is always stronger, what will be the decreasing order of acidic strength of the following conjugate bases ?

    OH^-, RO^-, CH_3COO^-, Cl^- .

    (ii) Define Buffer Solution. [2]

10. Write the oxidation number of under lined atoms. [2]

    $Na\underline{B}H_4$, $Na_2\underline{S_2}O_3$

11. (a) Complete the following equation:-

$$Pbs + H_2O_2 \longrightarrow$$

(b) What do you understand by electron deficient hydride? Write one example.

OR

(a) Discuss the principle of softening of hard water by ion exchange method.

(b) What do you mean by 'water gas shift reaction'? [2]

12. Write short notes on the following with example.
   (i)   Friedel craft alkylation.
   (ii) Peroxide effect [2]

13. (i) Name the dipositive ion represented by configuration

$$1s^2 \ 2s^2 \ 2p^6 \ 3S^2 \ 2p^6$$
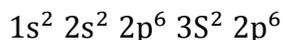
(ii) What is the difference between a quantum & a photon?

(iii) Name any two observations that cannot be explained by wave nature of electron.

[3]

14. (i) Explain why chlorine can be converted into chloride ion more easily as compared to fluoride ion from fluorine?

(ii) The radius of Na^+ cation is less than that of Na. Give reason.

(iii) What do you mean by effective nuclear charge? [3]

15. (i) Write the Lewis dot for HNO_3 .

(ii) Draw resonance structure for CO_2 molecule.

(iii) Write the hybridization of Sulphur in SF_4 & draw its shape. [3]

16. (i) Write the postulates of the kinetic molecular theory of gases. (any four points)

(ii)For real gas what will be the effect on value of Z (compressibility factor) above Boyle's temperature?

17. What will be the pressure of a gaseous mixture when 0.5 L of H_2 at 0.8 bar & 2.0L of O_2 at 0.7 bar are introduced in an one litre empty vessel at 27ºC ? [3]

OR

Two gases A and B having molecular masses 60 and 45 respectively are enclosed in a vessel. The mass of A is 0.50 gm and that of B is 0.20 gm. The total pressure of the mixture is 0.921 bar. Calculate the partial pressure of the two gases.

18. Balance the following redox reactions by ion electron method.
   (i) $MnO_4^- + I^- \rightarrow MnO_2 + I_2$
                    (Basic Medium)
   (ii) $Cr_2O_7^{2-} + SO_2 \rightarrow Cr^{3+} + SO_4^{2-}$
                    (Acid Medium) [3]

Pg-2

19. (i) Identify the substance oxidised & reduced in the following reaction.

$$HCHO + 2Cu^{2+} + 5\ OH^- \rightarrow Cu_2O + HCOO^- + 3H_2O$$
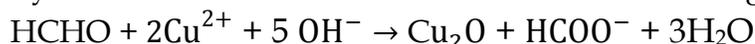
(ii) Nitric acid acts only as an oxidising agent while nitrous acid both as oxidising as well as reducing agent. Explain.

(iii) What do you mean by disproportion reaction?　　　　　　　　　　[3]

20. (a) Why alkali & alkaline earth metals cannot be obtained by chemical reduction method?
(b) Potassium carbonate cannot be prepared by Solvay's process. Why?
(c) In what ways does Lithium shows similarities to magnesium in its chemical behaviour? (Write two points only)　　　　　　　　　　[3]

21. (i) Complete the reaction
$$Al + NaOH + H_2O \rightarrow$$
(ii) Explain the structure of diborane.　　　　　　　　　　[3]

22. (a) Draw the bond line formula for Hexane dial.
(b) Using curved arrow notation show the formation of reactive intermediate in the following which undergoes heterolytic cleavage.
$$CH_3 - S - CH_3$$

(c) Explain why tertiary carbocation is more stable than secondary & primary carbocation. [3]

23. (i) Write two differences between Inductive effect & Resonance effect.

(ii) Identify the electrophilic centre in the following .
CH_3CN, $CH_3CH=O$　　　　　　　　　　[3]

24. (i) Why is benzene extraordinarily stable though it contains three double bonds?

(ii) An alkene 'A' on ozonolysis gives a mixture of ethanal & Pentan-3-one. Write the structure of A.

(iii) Arrange the following compounds in the order of their decreasing reactivity with an electrophile.

Chloro benzene, 2, 4 – dinitrochloro benzene, p-Nitro chlorobenzene　　[3]

25. (a) Write Hess's Law of constant heat summation. Mention any two of its application.

(b) The standard heat of formation of CH_4 (g), $CO_2(g)$ & $H_2O(g)$ are – 76.2, - 394.8 and - 241.6 KJ/mol respectively. Calculate the enthalpy of combustion of methane & also calculate the heat evolved by burning $1m^3$ of methane measured at NTP.　　[5]

OR

(a) What is meant by free energy of a system? Derive Gibb's Helmholtz equation.
(b) Calculate the equilibrium constant K for the following reaction at 400 K.
$$2NOCl\ (g) \qquad 2NO(g) + Cl_2\ (g)$$
Given　　that $\Delta_r H^o = 80$ KJ mol^{-1}
　　　　and $\Delta_r S^o = 120$ JK^{-1} mol^{-1}
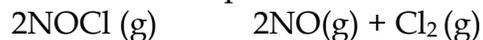
26. (a) Explain common ion effect with suitable example.

(b) It has been found that pH of a 0.01 M solution of an organic acid is 4.15. Calculate the concentration of anion, the ionisation constant & it's pK_a.

OR

(a) State and explain Le Chatelier's principle.

(b) Equilibrium constant Kc for the reaction
$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3 (g)$ at 500 K is 0.061. At a particular time, the analysis shows that the composition of the reactions mixture is 3.0 mol L^{-1} N_2 , 2.0 mol L^{-1} H_2 and 0.5 mol L^{-1} NH_3 . Is the reaction at equilibrium? If Not which direction reaction tend to proceed to reach equilibrium? [5]

27. (i) State Markovnikov's rule & give the mechanism of addition of HBr to propene.

(ii) Complete the following reaction.

(a) $CH_3 – CH = CH_2 + HBr \xrightarrow{\hspace{1cm}} A \xrightarrow{Na /Ether} B$

(b) + 3Cl$_2$ $\xrightarrow[500K]{Sun -light}$?   [5]
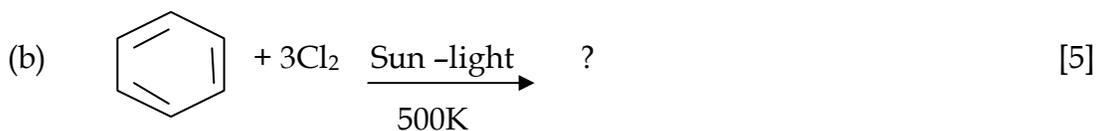
OR

. (i) What are the necessary conditions for a system to be aromatic?

(ii) How will you convert

(a) Benzene into p-chloronitrobenzene
(b) Hexane into Benzene
(c) Ethene into Ethyne

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2018-19)

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

General Instructions:-
1. *All questions are compulsory.*
2. *The question paper consists of four sections A, B, C and D.*
3. *Internal choice is given in all the sections. Student has to attempt only one of the alternatives in such questions.*
4. *Section A consists 5 questions of 1 mark each.*
5. *Section B consists 7 questions of 2 marks each.*
6. *Section C consists 12 questions of 3 marks each.*
7. *Section D consists 3 questions of 5 marks each.*
8. *Wherever necessary, the diagrams drawn should be neat and properly labelled.*

Section-A

1. What is meant by erythroblastosis foetalis?

    OR

    What is myasthenia gravis?   (1)

2. Why do Chloroplasts align themselves along the walls of mesophyll cells?   (1)

3. Mention any two metabolic disorders which can be diagnosed by analysis of urine.   (1)

4. What is monograph?   (1)

5. What is crossing over? Name the enzyme involved in the process.

    OR

    What is meant by 'turnover of biomolecules'?   (1)

Section B

6. Describe briefly the four major groups of protozoa.

    OR

    Mention two modifications in reptiles required for terrestrial mode of life. How is the mode of development in reptiles different from that of amphibia (Give two points).   (2)

7. Distinguish between: (Give two points).

    (a) Dense regular and dense irregular connective tissue.
    (b) Adipose and blood tissue.   (2)

8. What are nuclear pores? State their function.   (2)

9. What is mycorrhiza? How is mycorrhizal association helpful in absorption of water & minerals in plants?

    OR

    Why is it that in certain plants deficiency symptoms appear first in younger parts of the plant while in other they do so in mature organs? Explain with examples.   (2)

Pg-1

10. What is heterospory? Briefly comment on its significance. (2)

11. (a) How is intestinal mucosa protected from the acidic food entering from stomach?

    (b) What are chylomicrons? (2)

12. Define oxygen dissociation curve. Can you suggest any reason for its sigmoidal pattern? (2)

Section C

13. (a) Explain the mechanism of action of steroid hormone. Also draw a diagrammatic representation in support of your answer.

    (b) Write short notes on the function of the following hormones:
    (i) Parathyroid hormone
    (ii) Thymosins

OR

Name the components of formed elements in the blood and mention one major function of each of them. (3)

14. Explain the mechanism of generation of nerve impulse and its conduction along an axon. (3)

15. (a) Draw the diagram of a sarcomere of skeletal muscles showing different regions.

    (b) Distinguish between red muscle fibres & white muscle fibres. (3)

16. Explain briefly differentiation dedifferentiation & redifferentiation. (3)

OR

Briefly describe Calvin cycle. (3)

17. Differentiate between (Give two points):

    (a) C_3 and C_4 pathway

    (b) Cyclic and Non Cyclic photophosphorylation.

    (c) Absorption spectrum and action spectrum (3)

18. (a) What are the steps involved in formation of root nodule?

    (b) What is leg- haemoglobin? Give its role in nitrogen fixation. (3)

19. Explain the various types of phyllotaxy with examples.

OR

Explain the following terms:
(a) Exarch and endarch xylem.
(b) Open and closed vascular bundles.
(c) Interfascicular and intrafascicular cambium. (3)

20. (a) What is metalgenesis? Mention one example which exhibits this phenomenon?

    (b) What is the role of radula in Mollusca?

    (c) Which group of chordates possess sucking and circular mouth without jaws?

Pg-2

21. What is periderm? How does periderm formation occur in dicot stem? (3)

22. How can we differentiate between epithelial, muscular and nervous
tissue based on their structure and function? (3)

23. Structure and function are corelatable in living organisms. Can you justify this by taking
plasma membrane as an example.

OR

(a) Draw the cell cycle marking the different stages.
(b) Why is interphase called resting phase? During which phase of cell cycle the amount
of DNA becomes double. (3)

24. Describe the following:
(a) Synapsis
(b) Bivalent
(c) Chiasmata
Draw diagrams to illustrate your answer. (3)

Section D

25. (a) Illustrate a glycosidic, peptide and a phosphodiester bond.
(b) Mention the function of GLUT-4.
(c) Starch shows iodine test but cellulose does not. Explain.
(d) What is meant by competitive inhibitor? How does it affect the activity of an enzyme.
Explain with an example.

OR

(a) What is a centromere?
(b) How does the position of centromere form the basis of classification of chromosomes?
Draw diagrams showing the position of centromere on different types of chromosomes.
(c) What is Satellite chromosome?
(d) What is Kinetochore? What is its role? (5)

26. Explain ETS that occurs in mitochondrial membrane. Give the schematic representation of ETS.

OR

Explain in detail Citric acid cycle. Calculate the net ATP gain in aerobic respiration. (5)

27. (a) Explain in detail the mechanism of urine concentration.
(b) Explain the auto regulatory mechanism of GFR.

OR

(a) Draw a standard ECG and explain the different segments in it.
(b) What is Cardiac cycle? What is the duration of a Cardiac cycle?
(c) If the heart of a healthy person has a stroke volume of 70 ml, calculate his
Cardiac output. (5)

Pg-3

DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2018-19)

Class:-XI   **Subject:- Accountancy**
Time- 3 Hrs.   **M.M.-90**

General Instructions:-

 (i) Read questions carefully use the reading time meticulously.

(ii) Optional questions are there three in 1 mark, one question in 4 marks, 3 in 6 marks.

(iii) Questions Number should be indicted clearly.

(iv) Attempt all parts of the question together.

1.   Why is CGST, SGST and IGST paid on purchases debited to Input SGST Account and Input
        IGST Account.   [1]

                            OR

        What is compound voucher.

2.   What is the meaning of Ledger.   [1]

3.   Name the category of Accounts that are to be balanced.

                            OR

        Which Account should be debited if wages are paid for installation of the Machine?   [1]

4.   What is Journal?   [1]

5.   What is posting?   [1]

                            OR

        What is meant by Rebate?

6.   What are the major types of Reserves?   [1]

7.   A provision can be specific or General. Do you agree?   [1]

8.   From the following information calculate the amount to be taken to Profit and Loss Account.

        (i) Rent paid as per cash Book Rs. 70,000 and Rent outstanding at the end Rs. 10,000 where will
        the outstanding Rent appear.   [1]

9.   Name the main two Accounts maintained in 'Accounts for Incomplete records'.   [1]

10.   State two Advantages of Tailor-Made Software.   [1]

11.   (a) Under which concept if advance is received against sale of Goods, the Advance received
            is recorded as "Advance Against Sale" and not sales?   [3]

Pg-1

(b) Rent for the month of March, 2018 is not paid. Under which accounting concept it should be recorded as expense for the year ended 31st March, 2018?

(c) 'Closing stock is valued at lower cost or Market Price whichever is low' which concept of Accounting is applied here.

12.   In a burglary at the Godown of Hansraj Trader on the night of 14th July 2016. Part of the stock were stolen. From the following particulars find out the estimated value of loss of stock by theft.

	Rs.
Purchases from 1st April to -14th July 2016	4,10,000
Sales from 1st April to 14th July 2016	6,00,000
Stock remaining after burglary	12000

The Normal rate of gross profit for his business is 30 % of selling price.   [3]

13.   Define (i)   (a) Merchandise
                    (b) Distinguish between stock and inventory.   [1+1=2]
            (ii)   What is cash Discount? How is it different from trade discount?   [2]

14.   Explain Management Information System (MIS) explain data in context to (MIS) and the flow chart for MIS.   [4]

15.   From the following list of balance prepare a trial balance.

	Rs.
Capital A/c ………………..	2,00,000
Debtors A/c ……………….	30,000
Fixed Assets A/c………….	1,92,000
Sales A/c ……….	1,10,000
Return Outward A/c……..	1000
Bills Payable A/c ………….	8000
Bank overdraft A/c ………	11,000
Opening Stock A/c………	15,000
Creditors A/c…………….	30,000
Purchases A/c………….	70,000
Return inward A/c…….	2000
Wages and salaries A/c….	30,000
Bills Receivable A/c ……..	15,000
Rent A/c	6,000	[4]

Pg-2

16.   While trying to close his books of accounts for the year ended 31st March 2015. Mahesh found that the trial balance did not agree. He traced the following errors:-   [4]

1. The Purchases Book was undercast by Rs. 500.

2. The sales Book was overcast by Rs. 100.

3. Rs. 620 received from Mohan were posted to the debit of his Account.

4. A discount of Rs. 282 allowed to a customer has been credited to his account as 228.

Rectify the above errors assuming:-

1. That no suspense account has been opened with difference in the trial balance.

17. On 1st April 2010 , Hind Oil Ltd. Purchased Machinery for Rs,800,000. On 1st January 2013, a part of this Machine purchased on 1st April 2010 for Rs. 1,00,000 was sold for Rs. 44000 and on the same date a new machine was purchased for Rs. 1,20,000. Depreciation was provided @ 10% p.a. on original cost of the machinery and accounts are closed on 31st March every year. Show the Machinery Account and Machinery Displaced Account when "Provision for Depreciation Account" is not maintained.   [4]

18. Prepare Return Books of M/s. Gupta Brothers from the following transactions:-   [4]

2017	
March 7th	Returned to Arora & Co: Nai Sarai, Delhi, being not according to samples. 10 chairs @ Rs. 200 each. 1 Table for Rs. 600 Less : Trade Discount 10%
March 10	Subhash Furniture Co: Faridabad returned to us:- 2 Broker Almirahs @ Rs. 2000 each Less : 15 % Trade Discount
March 20	Returned to Fateh Chand & Co: Lajpat Nagar, New Delhi the following goods for being damaged in transit :- 5 Chairs @ Rs. 180 each. Less : 12 % Trade Discount
March 25	Ravi Saxena , Vaipur returned to us the following being not of specified quality:- 1. Dining table for Rs. 2,000 6 Chairs @ Rs. 200 each. Less : 15 % Trade Discount

Pg-3

19. Enter the following transactions in cash and Bank Column in the Cash Book.   [6]

2016		Rs.

June	1.	Commenced business with cash	1,00,000
	2.	Opened a current account in central Bank and Deposited.	80,000
	3.	Further capital Introduced Rs. 50,000, out of which 40,000 deposited into Bank.	
	3.	Purchased Goods on Credit from Gopal.	50,000
	4.	Paid to Gopal by cheque discount and	36000
		Discount received	500
	8.	Sold Goods to Ram on Credit	
	10.	Received cheque from Ram in full settlement of his Account.	7500
	11.	Commission paid to Agent	7230
	12.	Cheque Received on 10th June deposited into bank.	650
	15.	Office furniture purchased in cash from Modern Furniture House	12000
	16.	Paid for Rent	550
	18.	Drew cheque for personal use.	2000
	19.	Sold Goods to Ghanshyam on Credit	20,000
	24.	Received from Ghanshyam, cheque for Rs. 5000(Immediately deposited into Bank) and cash	3600
		Discount allowed	400
	25.	Withdrew from Bank for office use	10,000
	25.	Received a cheque from X and endorsed it to Y on 29th June.	6,000
	26.	Goods sold to Mohan on credit	1000
	28.	Received a money order from Mohan	300

20. On 1st April 2009. Atul Glass Limited purchased a machine for Rs. 90,000 and spent Rs. 6,000 on its cartage and Rs. 4000 on its erection. On the date of Purchase, it was estimated that the effective life of the machine will be 10 years and after 10 years its scrap value will be Rs. 20,000.

    Prepare Machine A/c and Depreciation A/c for 4 years after providing Depreciation on Fixed Installment Method Accounts are closed on 31st March every year. [6]

21. A sells goods for Rs. 40,000 to B on 1st January 2017 and on the same day draws a bill on B at three months for the amount B accepts it and returns it to A, who discounts in on 4th January, 2017 with his Bank @ 6% per annum. The acceptance is dishonoured on the due date and the noting charges were paid by bank being Rs. 200.

    On 4th April 2017, B accepts a new bill at three months for the amount then due to A together with interest @ 12% per annum.
Make Journal entries to record these transactions in the books of A and B. [6]

OR

Rajesh owed to Sunil Rs. 25000 on 1st April, 2013 on the same date, Sunil drew a bill of the same amount at 3 months on Rajesh. The bill was accepted by Rajesh, Sunil discounted the bill with his bank on 4th April, 2013 @ 18% p.a. On the due date , the bill was dishonoured and noting charges Rs. 250 were paid by the bank. Rajesh agreed to pay Rs. 5250 and accepted another bill for the remaining amount for 2 months together with the interest @ 12% p.a. On the due date, the bill was duly met. Give the journal entries in the books of Sunil.

22. On 1st March 2017 the bank balance as per Rajesh Chauhan's Cash Book was Rs. 17,280 Debit. On comparing the Cash Book with Pass Book.

Following differences were found:-

1. Cheque for Rs. 8400 sent for collection have not been cleared by the bank so far.

2. Cheques issued but not yet presented for payment Rs. 5600.

3. There is a debit of Rs. 80 in the pass Book for Bank charges but not recorded in the

   Cash Book.

4. Bank has credited Rs. 240 for interest in the Pass Book but these are also not recorded in the

   Cash Book.

5. A customer deposited Rs. 2000 direct in the Bank but these were recorded only in Pass Book.

6. According to the standing orders of Rajesh Chauhan the Bank has made the following

   payments by debiting his account :-

    (a) Club Fees Rs. 500
    (b) Life Insurance premium Rs. 2500

        These not recorded in Cash Book.

Prepare a Bank Reconciliation Statement as on 31st March 2017.

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

On 31st January, 2017 my Cash Book showed a Bank overdraft of Rs. 12,500. On comparing it with the Pass Book the following differences were noted.

<div align="center">Pg-5</div>

(i) Cash and cheques amounting to 1340 were sent to Bank on 27th January but cheque worth Rs. 230 were credited on 2nd February and one cheque for Rs. 45 was returned by them as dishonoured on 4th February.

(ii) During the month of January , I issued cheques worth Rs. 1670 to my creditors, out of these cheques worth Rs. 1370 were presented for payment on 5th February.

(iii) According to my standing orders, the Bankers have paid during the month of January the following :-

(a) Life Insurance premium	Rs. 170
(b) Television License Fee	Rs. 120
(c) Driving License Fee	Rs. 22

(iv) My banker has collected Rs. 150 as dividend on the shares.

(v) My banker have given me wrong credit for Rs. 150.
(vi Interest charged by bank Rs. 125
Prepare a Bank Reconciliation Statement. [6]

23. The Books of Deven Verma Could not be tallied the accountant transferred the difference of Rs. 1270 in the Suspense Account on the debit side. The following mistakes were found later on. Rectify these errors by Passing Journal and Prepare Suspense Account:-

(i) The purchase of Rs. 400 from Saran was entered into Sales Book but Saran's Personal Account was rightly credited.
(ii) The sale of Rs. 430 to Ramdas was credited in his account as Rs. 340.
(iii) The sales of old furniture of Rs. 540 was credited to sales Account as Rs. 450
(iv) Goods worth Rs. 100 were taken by the Proprietor which was not recorded in the books.
(v) The sales of Rs. 296 to Kishan was entered in the sales Book as Rs. 269.
(vi) Sales return book balance of Rs. 210 was not included in the accounts. [6]

OR

Pass the Journal Entries to rectify the following errors:-
1. Rs. 2000 paid for furniture purchased has been debited to purchases Account.
2. Rs. 3000 paid to Mohan Lal for salary were debited to his personal Account.
3. Rs. 500 paid for Proprietor's Medical bill were debited to "Sundry Expenses Account".
4. Typewriter purchased for Rs. 7500 has been wrongly passed through the Purchases Book.
5. An office Table purchased for Rs. 5000 has been passed through invoice book.
6. Rs. 800 paid for Rent wrongly debited to Land Lord's Account.

24. Gokul Das maintains incomplete record of his business. He wants to know the result of his business on 31st March 2013 and for that following informations one are available .

	1st April 2012 Rs.	31st March 2013 Rs.
Cash in hand	1,50,000	1,75,000
Bank Balance	2,50,000	6,00,000
Furniture	1,00,000	1,00,000
Stock	5,00,000	4,50,000
Creditors	3,50,000	4,00,000
Debtors	2,50,000	3,00,000

Personal expenses of Gokul Das paid from business Account amounted to Rs. 4,80,000 and goods worth Rs. 20,000 were withdrawn by him for personal use. He sold ornaments of his wife for Rs. 3,50,000 and invested that amount into the business. Calculate his profit or loss. [8]

25. From the following Trial Balance of M/S Arjun and sons as at 31st December 2016. Prepare Trading and Profit and Loss Account and Balanced sheet as on that date.

Name of Accounts	Dr. Rs.	Cr.Rs.
Drawing and Capital	18,000	80,000
Purchase and sales	82,600	1,55,000
Stock (1.1.2016)	42,000	
Return outward		1600
Carriage inward	1200	
Wages	4000	
Power	6000	
Machinery	50,000	
Furniture	14000	
Rent	22000	
Salary	15000	
Insurance	3600	
8% Bank Loan		25000
Debtors	20600	
Creditors		18900
Cash in hand	1500	
	-------------	……………
	2,80,500	2,80,500

Adjustments:-   [10]

(a) Closing stock Rs. 64000

(b) Wages outstanding Rs. 2400

(c) Bad debts Rs. 600 provision for bad and doubtful debts to be maintained @ of 5% on Debtor.

(d) Rent is paid for 11 months.

(e) Loan from Bank was taken on 1st July 2016.

(f) Provide Depreciation on Machinery @ 10% p.a.

 (g) Provide Manager's Commission @ 10% on the net profit after charging such commission.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI

Class:-XI   Subject:- Business Studies

Time- 3 Hrs.   M.M.-90

General Instructions:-

1. *Answer to questions carrying 1 mark may be from one word to one sentence.*
2. *Answer to question carrying 3 marks may be from 50-75 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. *All questions are compulsory attempt all parts of question together by giving the question numbers in bold.*

1. What does 'cryptography' refer to?   [1]

2. Define a share.

                                          OR

    Preference shares are not suitable to which kind of investors?   [1]

3. Mention any two causes of speculative risks.

                                          OR

    What is the modern concept of business?   [1]

4. ABC Ltd. planted trees on the roadside of several big cities. Name the objective ABC Ltd. is engaged in.

                                          OR

    Why do businessmen undertake business risk?   [1]

5. Is furniture making a manufacturing industry? Why?   [1]

6. Radha cooks food at home for her family and Ram Gopal, working as a cook makes food in a famous restaurant. Who is engaged in business activity and why?   [1]

7. Vinay, a B.Tech from IIT and Kapil, an MBA from IIM joined together and started manufacturing certain components used in cars. Over the years, they have expanded the scale of their operations. They are well aware of the fact that their factory is polluting the environment and they are supposed to install necessary equipment to check excessive air pollution.

    Kapil presses for installation of equipment to check air pollution which is being resisted by Vinay. It has been argued by Vinay that such a decision would involve a cash outlay of Rs. 5 lakhs which would reduce the working capital of the business and profit for the year would also go down by this amount. He further suggests that bribe could be paid to government officials if there is pollution audit of the factory.

    (a) Do you agree with Vijay's view point? Give reasons for your answer.

    (b) Is it ethical to ignore the damage to the environment?

    (c) If you were Kapil, how would you convince Vinay to install pollution control equipment in the factory?   [3]

8. After completing their graduation, Suresh and Ramesh decided to set up a flour mill to earn income. Their main job is to purchase wheat from the market and convert it into flour, which was available in the packets of 5kg, 10kg, & 20kg. They sell these under the brand name

'Desh ka Atta' , and earn a reasonable profit of 10% on cost. They worked very hard to flourish the business on a regular basis, and hence in no time their brand became very popular in the market. The main reasons for the success of their business are superior quality and low price. Their business was running very well.

But one day, the flour mill caught fire, and as a result they had to suffer a heavy loss. However, Suresh and Ramesh did not lose their heart, and worked even harder. Gradually, their business was back to normal. Now, they are fully
satisfied with their business.

Quoting the lines from the above para, explain any three characteristics of business.   [3]

OR

Ganga Ltd. is a popular company manufacturing water coolers. Its product is very much liked by people in the market. The traders are in a race to become the company's distributors. The company had been earning huge profits for many years. However, in the year 2018, the company's half yearly report shows a great decline in the company's profit. The top management is worried about this. A team from outside is appointed to solve this serious problem. After a thorough e thorough examination the specialists presented the following reasons for the decline in the profits of the company.

(a) Increase in the competition and change in taste of the consumers.
(b) Theft of cash and goods by the employees.

Identify and explain the two causes of decline in profits.

9.   Differentiate between the following activities into business, profession and employment:
(a) Mohan is selling books on behalf of the employer.
(b) Tania is practicing law or doing legal practice.
(c) A cart vendor is selling vegetables in different localities.   [3]

10.   A famous doctor charges high fees from his patients and refuses to treat poor patients without money. He takes gifts and commission from medical representatives and diagnostic centers also. In your view , is it professional behavior of a doctor? Explain the ethics of his profession and also mention two values that he is undermining.   [3]

OR

The insured must not be allowed to make any profit by selling the damaged property or in case of lost property being recovered . Which principle of insurance ensures this? Explain the same.

Q 11. Dhruv, Sarthak, & Dheeraj are the partners in a firm "Friends Pustak Bhandar".
All the three partners decided to donate 10% of the total profits to the poor children every year . This had a very positive effect on the goodwill of the firm.
Dheeraj is a very renowned businessman who allowed the use of his name by the firm but does not contribute capital. Sarthak had contributed capital to the firm but does not participate in the management of the firm . Dhruv actively participates in the management and does business on behalf of other partners.

Anil is the friend of Dhruv who is over enthusiastic and gives out business related decisions even when not asked which had given some awkward situation to Dhruv while discussing with the bank officials regarding availing of loan from the bank.

Explain the types of partners of "Friends Pustak Bhandar" in detail. [4]

12. With enactment of the LIC Act, 1956, an autonomous body , Life Insurance Corporation of India was formed. The Act defines its powers, duties and functions. It has a separate legal entity. It is fully owned by government. It has independent financial policy and can raise funds by borrowing from public and government. However it is not subject to any budgetary accounting or audit control like Railways. Its annual report is presented in parliament every year.
(a) Name the type of public sector enterprise referred to in the above para.
(b) State any three features of the public sector enterprise identified in (a)
    above. [4]

OR

Identify the following enterprises to which form of public enterprises they are related to and also explain briefly.
(a) Indian Railways.   (b) Reserve Bank of India
(c) Bharat Heavy Electricals Ltd.   (d) Oil and Natural Gas Corporation.

13. Vishal Khanna Jewellers does retail business of jewellery at a very large scale. The firm has to pay a lot of attention to advertisement. The owners of the firm are aware that if they spend more time on the advertisement some other important activities are left pending. One of the partners of the firm suggested that if the job of advertisement is handed over to some Advertising Company, they might be relieved of that important activity. By doing so , they will get benefit of specialization and their expenditure on this activity will be less also. The firm implemented this , which gave favourable results:-

(a) Identify the emerging modes of business discussed in the above para.
(b) Also explain any three other non-core business activities which can be done from
    outside organizations. [4]

14. Explain in detail two points each of arguments for and arguments against Social Responsibility. [4]

OR

Mention and explain, with suitable examples different kinds of Social Responsibilities.

15. Radhika Ltd. has good growth prospects. So it is being planned to expand the business. For this the company needs additional funds. The finance manager reports that the company is not in a position to bear extra burden of paying any fixed financial charges like interest or dividend. They do not want to bear any floatation costs even. Also the equity shareholders insist not to issue further shares as there is risk of dilution of control.

(a) Suggest the source of finance most suitable for Radhika Ltd.
(b) Enumerate any four merits and two demerits of the source of finance identified
    in (a) above. [4]

16. Write short notes on :- [4]
(a) NSIC   (b) NABARD

17. Explain what is WTO, with two points each of its objectives and benefits in detail. [4]

18. Gupta Stores is a famous shop selling all types of domestic goods. The owner of this firm

Mr. Mukul Gupta enthusiastically takes part in every social activity. For him business too is a medium of social service. He is working on the principle of 'High Quality' with reasonable price . He operates his business on a large scale. The details of some transactions done at his shop on a particular day is as follows:-

Mr. Suresh bought goods of Rs. 30,600 on credit for the marriage of his daughter. He said he would make the payment after one month.

Another firm 'Keshav Stores' had bought 200 items of a product, each priced at Rs. 400 a few days ago. Out of these, 5 items were defective. Now they sent back these 5 items with a document. Gupta Stores accepted the returned goods and immediately gave a written document in favour of Keshav Stores to the concerned person.

(a) Identify and explain the document issued to Mr. Suresh by Gupta Stores.
(b) Identify and explain the document sent by Keshav Stores to Gupta Stores.
(c) Identify and explain the document written by Gupta Stores in favor of Keshav Stores.
(d) State any two values being conveyed by Mr. Mukul Gupta to the society. [5]

19. What is a private ltd. company and what are the privileges of a private ltd. company?

Explain.

OR

Mention and explain with examples any five types of cooperative societies. [5]

20. Write a detailed note on various facilities offered by Telecom services with suitable examples. [5]

21. Explain any five benefits of a joint venture type of business enterprise, in detail. [5]

22. Krishna Pvt. Ltd. is facing the shortage of long term finance as it is a period of depression in the economy . The experts were consulted to determine the source of finance the company should raise. One financial advisor, Mr. Ram, advised that the company should use such a security on which it has a tax advantage and there is no dilution of control of the shareholders. Another finance specialist, Mr. Shiv advised that the company should not issue any debt or equity security but raise such a source of long-term finance which can be redeemed in easy installments.

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

23. Ram , Kabir and Gurpreet were three friends who belonged to the same village. They had completed their MBA education from IIM , Ahmedabad . They desire that the country should benefit from their education. With this aim they want to do such a business which will generate more employment and output, mobilize local resources, and contribute to the balanced regional development. For this they set up a small scale industrial unit in their own village.
Explain the Role of small business in India. [6]

24. Rekha Garments has received an order to export 20,000 men's trousers to Swift Imports Ltd. located in Australia. Rekha Garments makes necessary enquiry about the credit worthiness of the Swift Imports Ltd. and demands a letter of credit from it. After a week, Rekha Garments gets a letter of credit issued by the importer's bank.

Discuss the six- steps procedure that Rekha Garments would need to go through for executing the export order. [6]

OR

Shruti , Ekta and Divya are three neighborhood friends who study 11th standard, commerce. After going through the chapter of international trade Shruti said " today , we learnt about such type of trade in which manufacturing and trade takes place beyond the boundaries of one's own country and the payment is done in the foreign currency." Ekta replied " yes, this type of trade helps a country to earn foreign exchange and accelerate economic growth." Divya added " our teacher told us about this type of trade that the business transactions are subject to rules, laws and policies, tariffs and quotas of multiple countries. Such business involves higher risks of transit and blocking up of capital."

(a) About what type of trade was the discussion going on between the three friends?

(b) What do they say about the type of trade identified in (a) above.

State any two points each, other than that discussed by them.

Q 25. Kharbanda Ltd. deals in a variety of consumer products like toiletries, groceries, electronics clothing etc. The work place has been divided into a number of departments and every department sells a particular commodity. In this way almost all the needs of customers are fulfilled under one-roof.

Manchanda Ltd. deals in footwears. The company has 200 shops at different places of the country. The specialty of the business of this company is that at all its shops the goods available are of the same type and their prices are also the same. All sales are made strictly on cash basis.

Identify the type of retail trade done by Kharbanda Ltd., and Manchanda Ltd. Also state any three features of each. [6]

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2018-19)

Class:-XI   **Time- 3 Hrs.**
Subject:- Economics   **M.M-80**

General Instructions:-

(i) *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.*

(ii) *Question number 5, 6, 17 and 18 are short answer questions. They should be answered in 60 words each. Each question carries 3 marks.*

(iii) *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.*

(iv) *10 to 12 and 22 to 24 are long answer questions carrying 6 marks each. They should be answered in 100 words each.*

(v)   *Marks of each question is indicated against it.*

(vi)   *All parts of a question should be answered in one place.*

(vii)   *Word limit is not applicable for numerical problems.*

Section – A

1. Economic Problem arises due to :   [1]
    (a) Limited resources   (b) Unlimited wants

    (c) Resources have alternative uses   (d) All the above

2.   Define Marginal Product.   [1]

3.   When income of the consumer falls the impact on price-demand curve of an inferior good will   [1]

    (a) Shift to the right

    (b) Shift to the left

    (c) have a upward movement along the demand curve

    (d) have a downward movement along the demand curve

4.   In which market form is the demand less elastic?   [1]

5.   Explain the central problem of "For whom to produce"   [3]

                    OR

    Explain the central problem of "How to produce"?

6. State three basic dissimilarities between perfect competition and monopoly . [3]

7. (a) State the necessary and sufficient condition of producers equilibrium.

(b) At a price of Rs. 5 per unit of commodity A, the total revenue is Rs. 600. ?When its price rises by 20%, Total revenue increases by Rs. 300. Calculate the price elasticity of supply. [1+3=4]

8. Good Y is the substitute of good X. The Price of good Y falls. Explain the chain of effects of this change in the market of X. Use diagram. [4]

OR

The market for a commodity is equilibrium . The prices of inputs rise. Explain its chain of effects of this change till the market again reaches equilibrium. Use diagram.

9. Define market demand. Explain 2 important factors which affect the market demand only. [1+3=4]

10. A consumerconsumes only 2 goods X and Y , whose prices are Rs.5 and Rs. 4 respectively. If the consumer chooses a combination of the two goods with marginal utility of X equal to 4 and that of Y equal of 5. Is the consumer in equilibrium? Why or why not? What will a rational consumer do in this situation? Use utility analysis.

OR [6]

A consumer consumes only 2 goods X and Y. Marginal rate of substitution is 3 and per unit prices of X and Y are 4 and 2 respectively. Is the consumer in equilibrium?

What will be the further reaction of the consumer? Give reasons.

11. Explain the following features with implications. [6]

(a) "Free entry and exit" in monopolistic market.

(b) " Interdependence of firms" in oligopoly market.

12. Explain the relationship between AFC , AVC and AC. Use diagram. [6]

Section – B

13. What is the empirical relationship between mean, mode and median? [1]

14. If the mean and co-efficient of variation of a set of data is 10 and 5 respectively, then S.D is [1]

(a) 10   (b) 0.5   (c) 5   (d) None of these

15. We use price index number [1]
(a) to measure and compare prices   (b) to compare prices

(c) to measure prices   (d) none of the above

16. Write the formula to calculate Real wage from money wage. [1]

17. The following data shows the marks of 15 students in Accountancy and Economics. Construct a discrete bivariate frequency distribution table. [3]

Marks in Accountancy (x)	28	26	27	25	28	28	27	27	26	27	27	26	25	26	27
Marks in Economics (Y)	22	21	21	20	22	21	21	20	20	19	21	19	19	20	21

OR

The following marks are obtained by 25 students of a class in Mathematics paper carrying 50 marks.

19, 13, 12, 25, 32, 12, 31, 19, 21, 23, 27, 41, 29

30, 45, 39, 33, 40, 17, 11, 20, 26, 14, 41, 15

(i) Construct a frequency distribution when class intervals are inclusive, taking the lowest class as 10-19.

(ii) Also construct the class boundaries.

18. What are the precautions should be taken while selecting the base period. [3]

19. Find the combined standard deviation from the following data:

	Boys	Girls
Number	30	20
Mean	20	30
Standard Deviation	04	05

OR [4]

Calculate the quartile deviation from the following data:

Marks: 10-20   20-30   30-40   40-50

No. of Students: 07   10   14   09

20. Define correlation. Interpret the values of coefficient of correlation as 1,-1 and zero.

[1+3]

Pg-3

21. Calculate weighted aggregative price index number from the following data by using Passche's method: [4]

Commodity	Base Period		Current Period	
	Price	Quantity	Price	Quantity
A	02	10	04	05
B	05	12	06	10
C	04	20	05	15
D	02	15	03	10

22. (a) State any two important mathematical properties of median. [3+3]

(b) If the arithmetic mean of the data given below is 28. Find out the missing frequency.

X:	0-10	10-20	20-30	30-40	40-50	50-60
f:	12	18	27	?	17	06

23. Show the inequality in wages in two different firms using the Lorenz curve from the following data: [6]

Wages	No. of Workers	
	Firm A	Firm B
50-70	20	150
70-90	15	100
90-110	20	90
110-130	25	110
130-150	20	50

24. Calculate Karl Pearson's co-efficient of correlation by step deviation method and comment about the degree of correlation

X:	12	15	18	21	24	27	30
Y:	06	08	10	12	14	16	18

OR [6]

Calculate the coefficient of rank correlation of the following data and comment about the degree of correlation

X:	75	73	72	72	63	62	55	50
Y:	10	11	13	13	13	20	16	28

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Pg-4

DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2018-19)

Class:-XI   Subject:- History

Time- 3 Hrs.   M.M.-80

Attempt all the questions:-

Part-A   [4x2=8]

1. Write any two evidences that Hominoids have African Origin.

2. What does the term 'Republic' refer to in the history of the Roman Empire?

3. Describe two features of early feudal society in France.

4. What were the positive sides of the Industrial Revolution?

Part-B   [4x4=16]

Section-I   (Attempt any four)

5. Why would the early temple have been much like a house?

6. Write any four factors responsible for the rise of Arab Empire.
7. Compare details of Italian architecture of this period with Islamic architecture.
8. How satisfactory is a museum gallery display in explaining the culture of a people? Give examples from your own experience of a museum.
9. What are the major developments   before the Meiji restoration that made it possible for Japan to modernise rapidly?

Section-II (Compulsory) (VBQ)   [4]

10. Industrialisation has affected farming , transportation, communication and trade in many ways. How?

Part-C

(Attempt any four)   [8x4=32]

11. Describe the main features of the city of Babylon.
12. Describe the causes of success of Genghis Khan.
13. What do you understand by geographical discoveries? What were the main reasons behind these discoveries?
14. How did Japan re-emerge as an economic power of world after the defeat in Second World War?
15. Discuss the features of the nationalist movement in China during the post- First World War.

Part-D

(Attempt all the questions) (Source Based Questions)   [5x3=15]

16. A major difference between the two superpowers and their respective empires was that the Roman Empire was culturally much more diverse than that of Iran. The Parthians and later the Sasanians, the dynasties that ruled Iran in this period, ruled over a population that was largely Iranian. The Roman Empire, by contrast, was a mosaic of territories and cultures that

were chiefly bound together by a common system of government. Many languages were spoken in the empire, but for the purposes of administration Latin and Greek were the most widely used, indeed the only languages. The upper classes of the east spoke and wrote in Greek, those of the west in Latin, and the boundary between these broad language areas ran somewhere across the middle of the Mediterranean , between the African provinces of Tripolitania (which was Latin Speaking) and Cyrenaica (Greek-speaking). All those who lived in the empire were subjects of a single ruler, the emperor, regardless of where they lived and what language they spoke.

(i)   How would you differentiate the Roman Empire from Iran?   [1]
(ii)   Name two dynasties who ruled over Iran during this period.   [2]
(iii)   Which empire was bound together by a common system of government
         and why?   [2]

17. In Benedictine monasteries, there was a manuscript with 73 chapters of rules which were followed by monks for many centuries . Here are some of the rules they had to follow:
Chapter 6 : permission to speak should rarely be granted to monks.
Chapter 7 : Humility means obedience.
Chapter 33: No monk should own private property.
hapter 47: Idleness is the enemy of the soul, so friars and sisters should be occupied at certain times in manual labour, and at fixed hours in sacred reading.
Chapter 48: The monastery should be laid out in such a way that all necessities be found within its bounds: water, mill, garden workshops.

(i)   What does humility mean?   [1]
(ii)   What does chapter 47 say?   [2]
(iv)   What sort of values are reflected in this chapter?   [2]

18. In his novel Hard Times, Charles Dickens (1812-70), perhaps the most severe contemporary critic of the horrors of industrialization for the poor, wrote a fictional account of an industrial town of red brick, or of brick that would have been red if the smoke and ashes had allowed it; but as matters stood it was a town of unnatural red and black like the painted face of a savage. It was a town of machinery and tall chimney , out of which interminable serpents of smoke trailed themselves forever and ever, and never got uncoiled. It had a black canal in it, and a river that ran purple with ill-smelling dye, and vast piles of building full of windows where there was a rattling and a trembling all day long, and where the piston of the steam-engine worked monotonously up and down, like the head of an elephant in a stare of melancholy madness.'

(i) Who was Charles Dickens?   [1]
(ii) Which period and the country is he talking about in this passage.   [2]
(iii) Highlight any two social problems mentioned here.   [2]

Part-E (Map Questions)

19. Locate and Level the following on the given outline map of Australia.   [5]
    (a) Perth   (b) Sydney   (c) Adelaide   (d) Darwin   (e) Melbourne

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2018-19)

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

Note:- Attempt all the questions. All dimensions are in millimeters. Use both side of drawing sheets if necessary. Missing and mismatching dimensions, if any may be suitably assumed.

Follow SP: 46-2003 revised code (with first angle method of projections)

1. Multiple choice questions: [1x5=5]

    (i) When a point lies in H.P. and V.P, its front view will be

        (a) on xy line   (b) Below xy line   (c) Above xy line   (d) None

    (ii) An Isometric view draws by

        (a) Isometric Scale   (b) Actual Scale   (c) Main Scale   (d) None

    (iii) Heptagon has:

        (a) 5 sides   (b) 8 sides   (c) 7 sides   (d) None

    (iv) A tangent touch a circle at:

        (a) 4 points   (b) 2 points   (c) 1 point   (d) None

    (v) Scale 1:1 means:

        (a) Half size scale   (b) Full size scale   (c) Isometric Scale   (d) None

2. A point 'B' is 20 mm above the H.P. and 15 mm in front of the V.P. Draw the projections.

    Give the dimensions. [3]

3. A 50 long line is 20 mm in front of the V.P. and 10 mm above the H.P. line is vertical.

    Draw the projections. Give the dimensions. [3]

4. Draw a circle in a triangle of 50 mm sides. Give the dimensions. [5]

5. Construct an isometric scale. [4]

6. Draw the isometric projections of a circle of 50 mm diameter. It is in horizontal position.

    Give the dimensions. [5]

7. Draw the isometric projections of a Pentagonal Prism of base side 30 mm, height of the

    axis 60 mm, base side parallel to V.P. and axis is vertical. It is resting on the ground of its

    base. Give the dimensions. [7]

8. To construct a parabola curve, when the distance of the focus from the directrix is equal to 50 mm and eccentricity =1. [7]

9. I Fig-1, Draw its front view, top view and side view. Give the dimensions. [9]

10. A square pyramid of base side 40 mm, axis 65 mm long, its base on the ground and all the edges of the base equally inclined to the V.P. it is cut by a section plane, perpendicular to V.P. , inclined at 45° to the H.P. and bisecting the axis. Draw its front view, sectional top view and true shape of the section. Give the dimensions. [11]

11. Draw the Projection of a cone of base diameter 40 mm, height of the axis 50 mm, it is resting on the ground on point on its base circle. Axis inclined at 30° to the H.P. Draw the projections. Give the dimensions. [11]

DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2018-19)

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

General Instructions:-
1. Questions 1 to 14 are 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 to24 are of 6 marks each and may be answered in 200 words.
4. Question 25 carries 6 (3+3) marks , and is to be answered with the help of passage.

1.   How is sociology and political science related to each other?

2.   Define Capitalism.

3.   Explain the concept of Functionalism .

4.   Differentiate between Micro sociology and Macro sociology.

5.   How is power and authority differ from each other?

6.   Describe the rules of Endogamy and Exogamy.

7.   Discuss the role of peer group as an agency of socialization.

8.   Explain the Dimensions of culture.

9.   Define sampling error.

10.   What is conformity?

11.   How evolution is different from revolution?

12.   What is Cultural Lag?

13.   How Marx interpreted the term Alienation?

14.   What is meant by social ecology?

15.   Why is the study of the origin and growth of sociology important?

16.   Discuss major forms of social stratification.

17.   Discuss the kinds of Rights that exist in your society. How do they affect your life?

18.   Why should we promote cosmopolitanism over Ethnocentrism in the heterogeneous society today?

19.   How cooperation and conflict are two sides of the same coin?

20.   How technology and economy cause social change?

21.   What are the specificities of Indian culture and society and how do they affect the pattern of change?

22.   Define Social Order and discuss its main features.

23.   What are the basic features of Bureaucracy?

24.   What are the main arguments on either side of the debate about how to relate to tribal communities?

25 .   Read the given passage and answer the following questions:-

Coal , mineral oil and hydro-electricity are the three sources of power. But with the invention of internal combustion engine, mineral oil has become the most important source of power. During the last 25 years , the consumption of mineral oil as a source of energy has rapidly increased and it is feared that if the consumption goes on unchecked , the known oil deposits will not last more than few decades.

The oil producing countries also know the power of petroleum. By raising the price of oil , they have accumulated millions of petro-dollars . On the other hand industrialised countries have raised the price of their industrial goods Thus in this tug-of-war between the oil producing countries and the industrial nations , it is the developing countries who are suffering the most.

    (a) In the present scenario of energy crisis, what the steps can be taken to confront the challenge?
    (b) Considering global economy how the crisis may lead to serious conflict in the world? Explain with example.

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Class:- XI   **Time:- 3 Hrs.**
Subject:- Political Science   **F.M. :- 100**

General Instructions :

(a) All questions are compulsory.
(b) Q. No. 1 – 5 are 1 mark (Answer in 20 words each).
(c) Q. No. 6 – 10 are 2 marks (Answer in 40 words each).
(d) Q. No. 11 – 16 are 4 marks (Answer in 100 words each).
(e) Q. No. 17 – 20 are 5 marks (Answer in 150 words each).
(f) Q. No. 21 is picture based (5 marks).
(g) Q. No. 22 – 27 are 6 marks (Answer in 200 words each).

1.   What do you understand by the term no-confidence motion?

2.   According to Plato "Politics is an Art". Comment.

3.   What is meant by freedom of expression?

4.   "One man's rights end where the other man's begins". Comment.

5.   In what way can Public Interest Litigation help the poor?

6.   Who wrote essays 'On Liberty' and what is meant by the term 'Harm principle'?

7.   What are the functions of Delimitation Commission?

8.   Why do we have Federalism with a strong central government?

9.   What are the provisions borrowed from constitution of different countries by India?

10. What is Peace and how can peace by established?

11. Differentiate between Feminism and Socialism.

12. Describe the 'constitution as a living document', and what was the Keshavananda Bharti Case with regard to the constitution of India?

13. Explain Right to Freedom with special reference to Right to life, liberty, prevention detention and right of the accused.

14. What do you understand by Secularism and explain the concept of Principled Distance?

15. What do you understand by the term Nation and explain the main elements of Nationalism?

16. Explain the 3-tier structure of the Panchayati Raj along with its functions in details.

17. How is a Democracy more effective than Authoritarian governments in dealing with conflicting nationalist feelings?
18. Mention and explain any five powers and functions of the Indian Parliament.
19. What are the different provisions in the constitution to maintain the Independence of Judiciary?
20. What do you understand by the term development and discuss the social and ecological costs of the kind of development?
21.
    (a) Who controls the behaviour of the members in the House?
    (b) What is Anti-Defection Law?
    (c) Which was the Anti-Defection Amendment and when was it made?
    (d) Can the members returns to the party they have defected? Answer accordingly.
    (e) By which amendment was the above amendment modified and when?
22. What are some of the problems faced by refugees? How could the concept of global citizenship benefit them?

OR

"All citizens may be granted equal rights but all may not be able to equally exercise them". Explain.
23. Trace out in positivity the meaning of the statement that "Our Constitution is a living document", answer in details.

OR

What was the Minerva Mills Case (1980)?
24. What were the main differences between the Local Governments before 73rd Amendment and after the amendment in Panchayati Raj institution?

OR

Describe the growth of Local Government in India and what does the constitution say about it.
25. List four features of the Indian constitution that give greater power to the Central Government than the State Government.

OR

Explain how the role of governors has always been a controversial issue between the State and Centre.
26. Explain the Political Philosophy of our constitution?

OR

Why is it said that the making of the Indian constitution was unrepresentative? Give reasons.
27. Briefly discuss the three principles of Justice and explain each with the help of an example.

OR

How does Rawls use the idea of a Veil of Ignorance to argue that fair and just distribution can be defended on rational grounds?

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DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

ANNUAL EXAMINATION (2018-19)

Class:-XI   **Subject:- Engineering Graphics**

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

Note:- Attempt all the questions. All dimensions are in millimeters. Use both side of drawing sheets if necessary. Missing and mismatching dimensions, if any may be suitably assumed.

Follow SP: 46-2003 revised code (with first angle method of projections)

1. Multiple choice questions: [1x5=5]

    (i) When a point lies in H.P. and V.P, its front view will be

        (a) on xy line   (b) Below xy line   (c) Above xy line   (d) None

    (ii) An Isometric view draws by

        (a) Isometric Scale   (b) Actual Scale   (c) Main Scale   (d) None

    (iii) Heptagon has:

        (a) 5 sides   (b) 8 sides   (c) 7 sides   (d) None

    (iv) A tangent touch a circle at:

        (a) 4 points   (b) 2 points   (c) 1 point   (d) None

    (v) Scale 1:1 means:

        (a) Half size scale   (b) Full size scale   (c) Isometric Scale   (d) None

2. A point 'B' is 20 mm above the H.P. and 15 mm in front of the V.P. Draw the projections.

    Give the dimensions.   [3]

3. A 50 long line is 20 mm in front of the V.P. and 10 mm above the H.P. line is vertical.

    Draw the projections. Give the dimensions.   [3]

4. Draw a circle in a triangle of 50 mm sides. Give the dimensions.   [5]

5. Construct an isometric scale.   [4]

6. Draw the isometric projections of a circle of 50 mm diameter. It is in horizontal position.

    Give the dimensions.   [5]

7. Draw the isometric projections of a Pentagonal Prism of base side 30 mm, height of the

    axis 60 mm, base side parallel to V.P. and axis is vertical. It is resting on the ground of its

    base. Give the dimensions.   [7]

8. To construct a parabola curve, when the distance of the focus from the directrix is equal to 50 mm and eccentricity =1. [7]

9. I Fig-1, Draw its front view, top view and side view. Give the dimensions. [9]

10. A square pyramid of base side 40 mm, axis 65 mm long, its base on the ground and all the edges of the base equally inclined to the V.P. it is cut by a section plane, perpendicular to V.P. , inclined at 45° to the H.P. and bisecting the axis. Draw its front view, sectional top view and true shape of the section. Give the dimensions. [11]

11. Draw the Projection of a cone of base diameter 40 mm, height of the axis 50 mm, it is resting on the ground on point on its base circle. Axis inclined at 30° to the H.P. Draw the projections. Give the dimensions. [11]

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi
Annual Examination 2019

Class: XI   **Subject: Informatics Practices (065)**
Max Marks: 70   **Time: 3 Hours**

General Instructions:

- *There are 4 groups A, B, C, D*
- *Group A contains 30 marks of 3 sets of theory questions of each of 10 marks.*
- *Group B contains of 15 marks of Python programming*
- *Group C contains of 20 marks of RDBMS (MySQL)*
- *Group D contains of 05 marks of IT Applications*
- *Always keep margin at the left side of your answer script & clearly write the Question Numbers*
- *Try to maintain the order of the questions in each group during answering.*

GROUP – A

[30 marks]

Q1. Answer the following questions (General Theory)**:**   **[10 Marks]**

(a) Write the differences of Programming and Database languages in terms of evolution of software?   [2]

(b) Write the functions of the System Software with examples.   [2]

(c) Explain the uses of Hardware and Software with example.   [2]

(d) What is a Virus? How utility is related with it?   [2]

(e) What is a Bar Code Reader? How does a scanner work?   .   [2]

Q2. Answer following questions (Theory of Programming concept & Python)**:**   **[10 Marks]**

(a) How do you differentiate the use of **Algorithm** and **Flowchart**?   [2]

(b) Explain the role of **Logical Error** and **Syntax Error** to develop programming.   [2]

(c) What is a variable and how does is work? How can a variable be declared in Python?   [2]

(d) Differentiate between **Looping** and **Branching**. Give examples.   [2]

(e) What are the roles of **:** (colon symbol) and $*$ (asterisk) & $**$ in Python programming?   [2]

Q3. Answer the following: (Theory of RDBMS)   **[10 Marks]**

(a) What is RDBMS? Give two examples.   [2]

(b) What are the conditions to consider a field as Primary Key? What is a Foreign Key?   [2]

(c) Define: (i) Data **redundancy** (ii) Data **inconsistency**   [2]

(d) How can you restrict a field from reading repeated data? Give a command as example.   [2]

(e) Define different constraints of a table of a database.   [2]

GROUP – B (Python Programming)
[15 Marks]

(a) Write a Python code to enter two numbers and find the greater no. [1]

(b) Write a Python code to enter three numbers and find the greatest number. [2]

(c) Write a Python code to enter Length(l) and Breadth(b) of a rectangle and find Area(a) and Perimeter(p)[2]

(d) Write a Python code to accept two numbers and swap the numbers <u>not</u> using a third variable. [2]

(e) Write a Python code to find the sum of first 10 odd numbers. [2]

(f) Write a Python code to take the value of N and find: **S = 1 + 4 + 27 + 256 +…………Nth term.** [2]

(g) Write a Python code to display: [2+2]

(i)   *
          **
          ***
	(ii) *
	          **
	          ***

GROUP – C (RDBMS – MySQL)
[20 Marks]

Q 5. Write the <u>SQL commands</u> based on MySQL to: [15X1=15]

Table: CLASS

STDCODE	NAME	CLASS	SECTION	AVGMARK	DOB
S009	SUMIT MALHOTRA	11	A	86.55	12-DEC-1995
S010	KUSUM VIMANI	12	C	79.85	22-MAR-1994
S012	SARITA VERMA	12	C	98	23-JAN-1992
S015	KAILASH SINGH	10	D	78.45	5-OCT-1993
S020	SANJAY SRIVASTAVA	11	K	85.45	10-MAY-1990
S033	KAVITA SAXSENA	9	K	66.50	12-SEPT-1993
S052	BIJAY MAJUMDAR	12	B	88	5-NOV-1989

(a) Create the table Class, using NOT NULL, UNIQUE, PRIMARY KEY, DEFAULT value of Average Marks is 00.00 as constraints in appropriate attributes/fields/columns.

(b) Enter a new record: S009, Rashmi Sinha, 11, D, 80.5, 15-8-1991.

(c) Re-arrange the records in descending order on Average Marks.

(d) Display the Name, Class and Date Of Birth of the students who have either less than 80 Average Marks, OR year of birth before 1993.

(e) Display the Name, StdCode and Date of Birth of those whose first character of name is S.

(f) Display the Name, StdCode and Date of Birth of those where 4th latter of the Name is **I**.

(g) Display the Different Sections present in the table.

(h) Display the Different Sections and their corresponding numbers (of each sec.) of the table.

(i) Replace the Name "Sumit Malhotra" by "Sumitra Mahapatra".

(j) Display each of the Average Mark increased by 2.0 those are from A , B , C sections.

(k)

(l) Display Numbers of each section in the table of those who got Average Marks more than 75.

(m) Display the Maximum Average Marks of class 11 and 12.

(n) Display the values of Name and Date of Birth close together (concatenate).

(o) Delete the record(s) of those, are from 'D' section.

(p) Remove all of the blank spaces from name field.

Q 6. Write the OUTPUT of the SQL commands (& functions) based on MySQL: [10 X 0.5=5]

(a) SELECT INSTR(Name, 'l') FROM CLASS WHERE SECTION='D';

(b) SELECT DAYOFWEEK(DOB) FROM CLASS WHERE STDCODE="SO52";

(c) SELECT DAYOFWEEK(SYSDATE()); *[Consider today's date]*

(d) SELECT LEFT(Name,3) FROM CLASS WHERE STDCODE="SO15";

(e) SELECT SUBSTR(Name,3,4) FROM CLASS WHERE STDCODE="SO12";

(f) SELECT LOWER(Name) FROM CLASS WHERE STDCODE="SO12";

(g) SELECT SECTION FROM CLASS WHERE NAME NOT LIKE "_A%";

(h) SELECT Name, Class FROM CLASS WHERE Section IN ("A", "B", "C");

(i) SELECT Class , Section FROM CLASS WHERE Class>=12 AND Section="C";

(j) SELECT (AVGMARK + 10) FROM CLASS WHERE Class >=11;

GROUP-D (IT Applications)

[05 Marks]

Q 7. Answer the following questions.

(a) Explain the statement "e-Governance is the open window to reach Government. [1]

(b) How does e-Commerce link customer, seller, manufacturer, and distributor. [1]

(c) Can you explain "On-line library is a good example of e-Learning"? [1]

(d) Ramesh wants to develop an application by creating a form with some controls on Net Beans platform. Choose appropriate controls from Text Field, Labels, Option Button, Check Box, List Box, Combo Box, and Command Button by which he may design it rightly and write in the third column. [2]

Srl No	Control used to	Control
1	Display name	
2	Choose stream	
3	Choose the name of the city to enter into address	
4	Submit the form	

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DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2018-19)

Class:- XI   Time:- 3 Hrs.
Subject:- Physical Education   F.M. :- 70

General Instruction:-

(a) The question paper consists of 26 questions.
(b) All questions are compulsory.
(c) Answer to questions carrying 1 mark should be in approximately 10-20 words.
(d) Answer to questions carrying 3 marks should be in approximately 30-50 words.
(e) Answer to questions carrying 5 marks should be in approximately 75-100 words.

1.   What is Callisthenics exercise?   [1]

2.   What do you mean by slow twitch fibres?   [1]

3.   What is neuro-muscular co-ordination?   [1]

4.   What do You mean by oxygen debt?   [1]

5.   What is passive warming up?   [1]

6.   Write about second wind.   [1]

7.   What is motor skill?   [1]

8.   What is Explosive strength?   [1]

9.   How do you explain adolescence?   [1]

10. What is dynamic equilibrium?   [1]

11. Define skill.   [1]

12. What are the side effects of anabolic steroids? Explain in brief.   [3]

13. Explain the procedure and benefits of Padmasana.   [3]

14. Explain in brief the traits of Mesomorphs and Ectomorphs.   [3]

15. Last year, our school organized a programme 'Run for Unity'. All the students and teachers of
     your school were involved in this race. Such runs promote unity, peace and harmony among
     the people. After covering a distance of two kilometers, one student suddenly felt chest pain.
     He complained to a teacher regarding pain. Immediately some of the teachers, who were
     running beside him, took him to the doctor for necessary check up. His blood pressure was
     measured and ECG was also performed. Doctor said that it was not the case of heart problem.
     It was surely the problem of second wind which is a usual phenomenon for individual who
     does not practice to run a race.

Pg-1

Based on the above passage, answer the following question:
(a) What is physical fitness?

(b) What values did the teachers whose by taking the student to the doctor immediately?

(c) Was the student physically fit enough?   [3]

16.   Differentiate between growth and development.   [3]

17.   Explain the types of warming –up in detail.   [3]

18.   Discuss the various types of transfer of learning.   [3]

19.   Discuss the types of levers.   [3]

20.   Discuss the functions of muscles and circulatory system.   [5]

21.   Explain the developmental characteristics at different stages of development.   [5]

22.   What do you mean by yoga? Explain its importance in daily life.   [5]

23.   What do you mean by sports training? Enumerate the principles of sports training.   [5]

24.   Define learning. Elaborate the causes of plateaus in the field of physical education and sports.   [5]

25.   What is river rafting? Discuss about their grades of difficulty.   [5]

26.   Write notes on: [5]

       (a) Skill

       (b) load

       (c) Adaptation

       (d) Technique

       (e) Over load

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Pg-2

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2018-19)

Class:- XI   Time:- 2 Hrs.
Subject:- Fine Art – Painting /Graphics   F.M. :- 40

General Instructions:
All the eight questions are compulsory which carry equal marks.

1. Why Ajanta is important? Where it is located? What are Chaitya and Vihar Caves? Write a note on any one painting or sculpture of Ajanta.   [5]

2. Explain the characteristics of Indo Islamic Art & Architecture. Write about any one architecture.   [5]

3. How do you understand Rock Art / Cave Painting? What are its features? Describe any Rock Art.   [5]

4. What is seal? What were the purposes of seals? Write short notes on seals found at Indus Valley Civilization.   [5]

5. What are the social and moral values depicted in the sculpture 'Trimurti' of Elephanta or 'Lion Capital' of Sarnath. Explain in detail.   [5]

6. What are the characteristics of the bronze sculpture 'Natraj' or 'Devi-Uma'.   [5]

7. Write in one word / sentence:-   [5]
   (a) Bronze sculpture of Indus Valley Civilization.
   (b) Period in which Gandhara & Mathura Art developed.
   (c) Name of famous Jain temple sculpture.
   (d) Sculpture which is called Indian Monalisa.
   (e) The relief sculpture of Pallava Period.

8. Fill in the blanks:-   [5]
   (a) The mountain shape on top of temple is called _____ .
   (b) _____ is the temple of Basera style of architecture.
   (c) _____ is the famous sculpture of Rashtrakutas Dynasty.
   (d) _____ discovered Bhimbetka Rock art sites.
   (e) _____ sculpture is based on dance and music.

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