



Instructions:

- All questions are compulsory.
- The question paper consists of 30 questions divided into four sections A, B, C and D. Section-A comprises 6 questions of 1 mark each; Section-B comprises 6 questions of 2 marks each; Section-C comprises 10 questions of 3 marks each and Section-D comprises 8 questions of 4 marks each.
- There is no overall choice in this question paper.
- Use of calculator is not permitted.

Section A

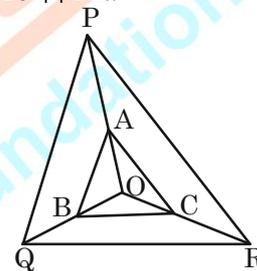
- Find the HCF of $2^3 \times 3^2 \times 5$, $2^3 \times 3^3 \times 5^2$ and $2^2 \times 3 \times 5^3 \times 7$
- In a throw of a pair of dice, what is the probability of getting a doublet?
- A set of numbers consists of eight 4's, four 5's, five 7's and six 9's. Then find the Mode.
- Find the sum of the roots of equation $2x^3 - 5x^2 + 6x - 123 = 0$.
- Write whether the rational number $\frac{7}{75}$ will have a terminating decimal expansion or non-terminating repeating decimal expansion.
- If $\sec A = 2$, find the value of $4 + 4 \tan^2 A$

Section B

- Find the area of a triangle whose vertices are (6, 3), (-3, 5) and (4, -2)
- How many natural numbers are there between 200 and 500, which are divisible by 7?
- Solve the pair of linear equations $3x + 4y = 10$ and $2x - 2y = 2$ by the elimination method.
- Find the values of k for which the equation $kx^2 + kx + 1 = 0$ has real and equal roots.
- The king, queen and jack of clubs are removed from a deck of 52 playing cards and then well shuffled. One card is selected from the remaining cards. Find the probability of getting
(a) a king of club (b) the '10' of hearts
- If two triangles are equiangular, prove that the ratio of the corresponding side is same as the ratio of corresponding medians.

Section C

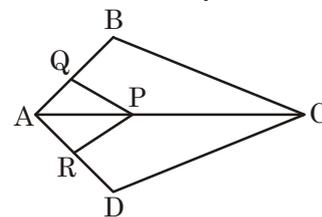
- Show that the cube of a positive integer of the form $6q + r$, q is an integer and $r = 0, 1, 2, 3, 4, 5$, is also of the form $6m + r$.
 - If the zeroes of the polynomial $f(x) = x^3 - 3x^2 + x + 1$ are $(a - b)$, a, $a + b$, find a and b.
 - The age of Devashish is twice the sum of the ages of his two children. After 20 years, his age will be equal to the sum of the ages of his children. Find the age of Devashish.
 - If the points (0, 0), (1, 2) and (x, y) are collinear then find the relation between x and y.
- or**
- In which ratio does the y-axis divide the line segment joining the points P(-4, 5) and Q(3, -7)? Also, find the coordinates of the points of intersection.
- In figure A, B and C are points on OP, OQ and OR respectively such that $AB \parallel PQ$ and $BC \parallel QR$. Show that $AC \parallel PR$.



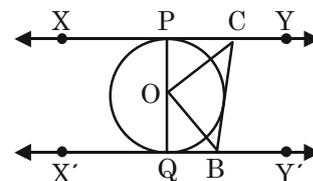
or

In figure below if $PQ \parallel BC$ and $PR \parallel CD$. Prove

that (a) $\frac{AR}{AD} = \frac{AQ}{AB}$ (b) $\frac{QB}{AQ} = \frac{DR}{AR}$



- In given figure XY and X'Y' are two parallel tangents to a circle with centre O and another tangent CB with point of contact C intersecting XY at C and X'Y' at B. Prove that $\angle COB = 90^\circ$.



19. If $\operatorname{cosec} A = \sqrt{2}$, find the value of

$$\frac{2\sin^2 A + 3\cot^2 A}{4\tan^2 A - \cos^2 A}$$

or

Evaluate
$$\frac{\sin^2 20^\circ + \sin^2 70^\circ}{\cos^2 20^\circ + \cos^2 70^\circ} + \frac{\sin(90 - \theta)\sin \theta}{\tan \theta} + \frac{\cos(90^\circ - \theta)\cos \theta}{\cot \theta}$$

20. From a circular steel plate of diameter 20 cm, a segment with a chord of length 16 cm is cut out. Find the height of the segment.
21. An oil funnel of tin sheet consists of a cylindrical portion 20cm long attached to a frustum of a cone. If the total height be 32cm, diameter of the cylindrical portion be 18cm and the diameter of the top of the funnel be 36cm, find the area of the tin required to make the funnel.

or

A toy is in the form of a cone surmounted on a hemisphere. The diameter of the base of the cone and that of hemisphere is 18cm and the height of cone is 12cm. Calculate the surface area of the toy.

22. Find the mode of the following distribution of marks obtained by the students in examination:

M.O	0-20	20-40	40-60	60-80	80-100
No. of Student	15	18	21	29	17

Given the mean of the above distribution is 53, using empirical relationship estimate the value of its median.

Section D

23. A two-digit number is such that the product of its digit is 18. When 63 is subtracted from the number the digits interchange their places. Find the number.

or

The sum of the areas of two squares is 640 m^2 . If the difference in their perimeters be 64 m, find the sides of the two squares.

24. Determine k so that $k^2 + 4k + 8$, $2k^2 + 3k + 6$, $3k^2 + 4k + 4$ are three consecutive terms of an AP.

25. If two triangles are equiangular, prove that the ratio of the corresponding side is same as the ratio of corresponding medians.

or

D is a point on the side BC of ΔABC such that $\angle ADC = \angle BAC$. Prove that $CA^2 = CB \times CD$.

26. Draw a triangle ABC with side $BC = 7 \text{ cm}$, $\angle B = 45^\circ$, $\angle A = 105^\circ$. Then construct a triangle whose side are $\frac{4}{3}$ times the corresponding side of ΔABC .

27. Prove that $\frac{\cos \theta - \sin \theta + 1}{\cos \theta + \sin \theta - 1} = \operatorname{cosec} \theta + \cot \theta$.

28. The angles of depression of two ships from the top of a light house and on the same side of it are found to be 45° and 30° . If the ships are 200m apart, then find the height of the light house.

29. A well of diameter 3m is dug 14m deep. The Earth taken out of it has been spread evenly all around it in the shape of a circular ring of width 4m to form an embankment. Find the height of the embankment.

30. Find the value of x and y, if median is 31.

Class	Frequency
0-10	5
10-20	x
20-30	6
30-40	Y
40-50	6
50-60	5
Total	40

or

The following frequency distribution shows the distance (in metres) thrown by 68 students in a Javelin throw competition.

Dist (m)	No of students
0-10	4
10-20	5
20-30	13
30-40	20
40-50	14
50-60	8
60-70	4

Draw a less than type ogive for the given data and find the median distance thrown using this curve.



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Section A

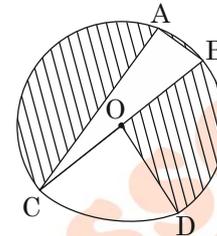
- After how many decimal places decimal expansion of the rational number $\frac{7}{120}$ will terminate.
- If one of the zeroes of the polynomial $(k - 1)x^2 + 1$ is 3, and then find the value of k.
- If $x = 3\sec^2\theta - 1$, $y = \tan^2\theta - 2$, then find the value of $x - 3y$ is
- Two dice are thrown together. Find the probability of getting the same number on both dice.
- If the n th term of an A.P. is $(2n + 1)$, then determine the sum of its first three terms.
- The length of shadow of a tower on the plane ground is $\sqrt{3}$ times the height of the tower. Find the angle of elevation of sun.

Section B

- Two tankers contain 850 litres and 680 litres of petrol respectively. Find the maximum capacity of a container which can measure the petrol of either tanker in exact number of times.
- Evaluate $\frac{\sin^2 63^\circ + \sin^2 27^\circ}{\cos^2 17^\circ + \cos^2 73^\circ}$
- Three consecutive vertices of a parallelogram are $(-2, -1)$, $(1, 0)$ and $(4, 3)$. Find the fourth vertex.
- Find the value of m so that the quadratic equation $mx(x - 7) + 49 = 0$ has two equal roots.
- Two tangents PA and PB are drawn from an external point P to a circle with centre O. Prove that AOBP is a cyclic quadrilateral.
- The diameter of the wheel of a bus is 140 cm. How many revolutions per minute must the wheel make in order to keep a speed of 66 km per hour?

Section C

- Prove that $\sqrt{2} + \sqrt{3}$ is an irrational number.
- 5 Pencils and 7 pens together cost Rs. 50, whereas 7 pencils and 5 pens together cost Rs.46. Find the cost of one pencil and a pen.
- In figure, O is the centre of the circle with $AC = 24$ cm, $AB = 7$ cm and $\angle BOD = 90^\circ$. Find the area of the shaded region.(Use $\pi = 3.14$)



- A contract on construction job specifies a penalty for delay of completion beyond a certain date as follows : Rs. 200 for the first day, Rs. 250 for the second day, Rs. 300 for the third day, etc., the penalty for each succeeding being Rs. 50 more than for the preceding day. How much money the contractor has to pay as penalty, if he has delayed the work by 30 days?

or

The sum of 5th and 9th terms of an A.P. is 72 and the sum of 7th and 12th terms is 97. Find the A.P.

- Solve the following quadratic equation for x:
 $x^2 - 4ax - b^2 + 4a^2 = 0$

or

Sum of the areas of two squares is 468m^2 . If the difference of their perimeters is 24 m, find the sides of the two squares.

- BC is an isosceles triangle with $AC = BC$. If $AB^2 = 2 AC^2$, prove that ABC is a right triangle.
- A solid sphere of radius 10.5 cm is melted and recast into smaller solid cones, each of radius 3.5 cm and height 3 cm. find the number of cones so formed. (Use $\pi = 22/7$).

or

How many spherical lead shots each having diameter 3 cm can be made from a cubical solid of dimensions 9 cm \times 11cm \times 12 cm?

- Meena went to a bank to withdraw Rs 2000. She asked the cashier to give her Rs 50 and Rs 100 notes only. Meena got 25 notes in all. Find how many notes of Rs 50 and Rs 100 she received.

21. Find the median of the following data:

Class	Frequency
0-10	5
10-20	3
20-30	4
30-40	3
40-50	3
50-60	4
60-70	7
70-80	9
80-90	7
90-100	8

or

Find the mode of the following distribution:

Classes	Frequency
0-20	25
20-40	16
40-60	28
60-80	20
80-100	5

22. Cards marked with the numbers 2 to 101 are placed in a box and mixed thoroughly. One card is drawn from this box. Find the probability that the number on the card is:
- a prime
 - divisible by 3 and 2 both
 - a number which is a perfect square

Section D

23. Prove $\frac{\tan \theta}{1 - \cot \theta} + \frac{\cot \theta}{1 - \tan \theta} = 1 + \sec \theta \operatorname{cosec} \theta$

or

Prove that

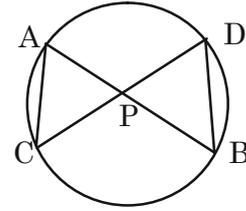
$$(\sin \theta + \operatorname{cosec} \theta)^2 + (\cos \theta + \sec \theta)^2 = 7 + \tan^2 \theta + \cot^2 \theta$$

24. Find all the zeroes of the polynomial $x^4 + x^3 - 34x^2 - 4x + 120$, if two of its zeroes are 2 and -2.
25. A vertical tower stands on a horizontal plane and is surmounted by a vertical flag-staff of height h . At a point on the plane, the angles of elevation of the bottom and the top of the flag-staff are α and β respectively. Prove that the height of the tower is $\frac{h \tan \alpha}{\tan \beta - \tan \alpha}$

or

The shadow of a vertical tower on level ground increase by 10 metres, when the altitude of the sun changes from angle of elevation 45° to 30° . Find the height of the tower, correct to one place of decimal. (Take $\sqrt{3} = 1.73$)

26. In figure, two chords AB and CD intersect each other at the point P.



Prove that:

(a) $\triangle APC \sim \triangle DPB$

(b) $AP \cdot PB = CP \cdot DP$

27. Determine the ratio in which the line $3x + y - 9 = 0$ divides the line-segment joining the points (1, 3) and (2, 7).
28. Draw a triangle ABC with side $BC = 7\text{cm}$, $AB = 6\text{cm}$ and $\angle ABC = 60^\circ$. Construct a triangle whose side is $\frac{3}{4}$ of the corresponding sides of $\triangle ABC$.
29. Find the mean marks for the following data:

Class	Number of observations
10 and above	100
20 and above	89
30 and above	74
40 and above	54
50 and above	24
60 and above	10
70 and above	0

30. A spherical glass vessel has a cylindrical neck 8 cm long, 2 cm in diameter. The diameter of the spherical part is 8.5 cm. By measuring the amount of water it holds, a child finds its volumes to be 345 cm^3 . Check whether she is correct, taking the above as the inside measurements and $\pi = 3.14$.

or

A solid iron pole consists of a cylinder of height 220 cm and base diameter 24 cm, which is surmounted by another cylinder of height 60 cm and radius 8 cm. Find the mass of the pole, given that 1 cm^3 of iron has approximately 8g mass (Use $\pi = 3.14$).



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Section A

- If α, β are zeroes of the polynomial $f(x) = x^2 + x + 1$, then $\frac{1}{\alpha} + \frac{1}{\beta}$.
- If two positive integers a and b are written as $a = x^3y^2$ and $b = xy^3$, x, y are prime numbers, then find HCF (a, b).
- The angle of elevation of the top of a tower from a point on the ground, which is 30 m away from the foot of the tower, is 30° . Find the height of the tower.
- A baby is born. It is a boy or girl. Explain whether the experiment is equally likely or not.
- The length of the minute hand of a clock is 14cm. Find the area swept out by the minute hand in 1 hour.
- If the mid-point of the line segment joining the points $P(6, k-2)$ and $Q(-2, 4)$ is $(2, -3)$, then find the value of k .

Section B

- Show that every positive even integer is of the form $2q$ and that every positive odd integer is of the form $2q + 1$, where q is some integer.
- A car has two wipers which do not overlap. Each wiper has a blade of length 25cm sweeping through an angle of 115° . Find the total area cleaned at each sweep of the blades.
- If the point $C(-1, 2)$ divides internally the line segment joining $A(2, 5)$ and B in ratio $3 : 4$ find the coordinates of B .
- If α and β are the zeroes of the quadratic polynomial $f(x) = x^2 - x - 2$, find a polynomial whose zeroes are $2\alpha + 1$ and $2\beta + 1$.
- Solve the pair of linear equations $x + 3y = 6$ and $2x - 3y = 12$ by substitution method.
- Two concentric circles are of radii 5 cm and 3 cm. Find the length of the chord of the larger circle which touches the smaller circle.

Section C

- Prove that the diagonals of a trapezium divide each other proportionally.
- The sum of the areas of two squares is 640 m^2 . If the difference in their perimeters be 64 m, find the sides of the two squares.

or

Two water taps together can fill a tank in 6 hours. The tap of larger diameter takes 9 hours less than the smaller one to fill the tank separately. Find the time in which each tap can separately fill the tank.

- Two cubes each of the volume 27 cm^3 are joined end to end to form a solid. Find the surface area of the resulting cuboid.

or

A cone of height 20 cm and radius of base 5 cm is made up of modelling clay. A child reshapes it in the form of a sphere. Find the diameter of the sphere.

- In two concentric circle, prove that all chords of the outer circle which touch the inner circle are of equal length.
- Show that 12^n cannot end with the digit 0 or 5 for any natural number n .
- Point $P(5, -3)$ is one of the two points of trisection of the line segment joining the points $A(7, -2)$ and $B(1, -5)$ near to A . Find the coordinates of the other point of trisection.

- If $\sin \theta + \cos \theta = p$ and $\sec \theta + \operatorname{cosec} \theta = q$, show that $q(p^2 - 1) = 2p$.

or

If $\sin \theta = \frac{4}{5}$, find the value of $\frac{4 \tan \theta - 5 \cos \theta}{\sec \theta + 4 \cot \theta}$.

- From a point on the ground, the angles of elevation of the bottom and top of a transmission tower fixed at the top of a 20 m high building are 45° and 60° respectively. Find height of the tower.
- If $A+B = 90^\circ$, prove that

$$\sqrt{\frac{\tan A \tan B + \tan A \cot B}{\sin A \sec B} - \frac{\sin^2 B}{\cos^2 A}} = \tan A$$

or

Prove that $\frac{\sin \theta}{1 + \cos \theta} + \frac{1 + \cos \theta}{\sin \theta} = 2 \operatorname{cosec} \theta$

- Find the median for the following distribution:

CI	0-8	8-16	16-24	24-32	32-40	40-48
F	8	10	16	24	15	7

Section D

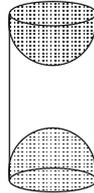
23. Solve for x : $\frac{6}{x} - \frac{2}{x-1} = \frac{1}{x-2}$; $x \neq 0, 1, 2$

or

A natural number, when increased by 12, becomes equal to 160 times its reciprocal. Find the number.

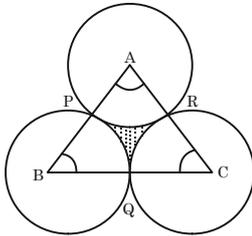
24. Find the zeroes of the polynomial $f(x) = x^3 - 12x^2 + 39x - 28$, if it is given that the zeroes are in A.P.

25. A wooden article was made by scooping out a hemisphere from each end of a solid cylinder. If the height of the cylinder is 20 cm and radius of the base is 3.5 cm. Find the total surface area of the article.



or

The area of an equilateral triangle is 17320.5 cm^2 . With each vertex as centre, a circle is described with radius equal to half the length of the side of the triangle. Find the area of the shaded region. [Use $\pi = 3.14$ and $\sqrt{3} = 1.73205$]



26. A fraction is such that if the numerator is multiplied by 3 and the denominator is reduced by 3, we get $18/11$, but if the numerator is increased by 8 and the denominator is doubled, we get $2/5$. Find the fraction.

27. A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is:
(a) either a black card or a king
(b) a jack, queen or a king
(c) neither a red card nor a queen
(d) a ten

28. Prove that the ratio of the areas of two similar triangles are equal to the ratio of the squares of any two corresponding sides.

29. Draw a right triangle in which sides (other than hypotenuse) are of lengths 8 cm and 6 cm. Then construct another triangle whose sides are $3/4$ times the corresponding sides of the first triangle.

30. Following is the distribution of marks, obtained by 50 students in a certain subject:

Marks	No. of students
more than 0	50
more than 10	46
more than 20	40
more than 30	20
more than 40	10
more than 50	3

Calculate the median marks.

or

The following data gives the distribution of total household expenditure (in rupees) of manual workers in a city.

Expenditure (in rupees)	Manual workers (frequency)
1000-1500	24
1500-2000	40
2000-2500	33
2500-3000	28
3000-3500	30
3500-4000	22

Find the average expenditure (mean) which is being done by the maximum number of manual workers.



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Section A

- Find the mode of the data 6, 4, 3, 6, 4, 3, 4, 6, 5 & 6
- If a, b, c are the zeroes of the polynomial $f(x) = x^3 - 3x^2 + 7x + 1$, then find the value of $ab + bc + ca$.
- If $\cos A = 4/5$, then find the value of $\operatorname{cosec} A$.
- A card is drawn from a well-shuffled deck of 52 playing cards. Find the probability that the card will not be an ace.
- The radii of two circles are 4 cm and 3 cm respectively. Find the diameter of the circle having area equal to the sum of the areas of the two circles (in cm).
- If the diameter of a semicircular protractor is 14 cm, then find the perimeter of the protractor.

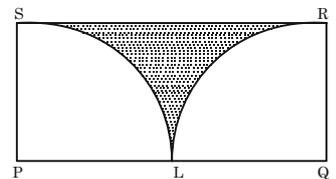
Section B

- Find the zeroes of the polynomial $x^2 - 3$ and verify the relationship between the zeroes and the coefficients.
- For the pair of equations $kx + 3y = -7$ & $2x + 6y = 14$ to have infinitely many solutions, the value of k should be 1. Is the statement true? Give reasons.
- P and Q are the points on the sides DE and DF of a triangle DEF such that $DP = 5\text{cm}$, $DE = 15\text{cm}$, $DQ = 6\text{cm}$ and $QF = 18\text{cm}$. Is $PQ \parallel EF$? Give reasons for your answer.
- Prove that $4 - 5\sqrt{2}$ is an irrational number.
- Find a relation between x and y such that the point $P(x, y)$ is equidistant from the points $A(1, 4)$ and $B(-1, 2)$.
- Two cubes, each of side 4 cm are joined end to end. Find the surface area of the resulting cuboid.

Section C

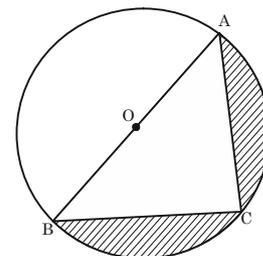
- In a ΔPQR , $PR^2 - PQ^2 = QR^2$ and M is a point on side PR such that QM is perpendicular PR. Prove that $QM^2 = PM \times MR$.
- Two poles of equal heights are standing opposite each other on either side of the road which is 80m wide. From a point between them on the road, the angles of elevation of the top of the poles are 60° and 30° , respectively. Find the height of the poles and the distances of the point from the poles.
- Find the sum of first n terms of an A.P. whose nth term is $5n - 1$. Hence find the sum of first 20 terms.
- Show that the square of any odd positive integer can be of the form $6q + 1$ or $6q + 3$ for some integer q.
or
Prove that if x and y are odd positive integer, then $x^2 + y^2$ is even but not divisible by 4.
- Verify that $\frac{1}{2}$, 1, -2 are the zeroes of the cubic polynomial $p(x) = 2x^3 + x^2 - 5x + 2$, and then verify the relation between the zeroes and the coefficients.
or
If the zeroes of the polynomial $f(x) = x^3 - 3x^2 + x + 1$ are $a - b$, a, $a + b$, then find the value of a and b.
- For what values of k the pair of linear equations $2x + 3y = 4$ and $(k + 2)x + 6y = 3k + 2$ will have infinitely many solutions?

- PQRS is a rectangle in which length is two times the breadth and L is mid-point of PQ. With P and Q as centres, draw two quadrants as shown in figure. Find the ratio of the area of rectangle PQRS to the area of shaded portion.



or

Find the area of the shaded region in figure, if $AC = 24\text{cm}$, $BC = 10\text{cm}$ and O is the centre of the circle.



20. Two dice are thrown simultaneously. What is the probability that
 (a) 4 will not come up on either of them?
 (b) 4 will come up on at least one?
 (c) 4 will come up at both dice?
21. Two numbers differ by 4 and their product is 192. Find the numbers.

or

The difference between two numbers is 7. If the difference of their reciprocals is $\frac{7}{30}$, find the two numbers.

22. Find the mode of the following distribution:

Class	0-20	20-40	40-60	60-80	80-100
F	25	16	28	20	5

Section D

23. If $\tan \theta + \cot \theta = m$ and $\tan \theta - \cot \theta = n$, Show that $m^2 - n^2 = 4\sqrt{mn}$.
- or**
- If $\sec \theta + \tan \theta = x$, obtain the value of $\sec \theta$, $\tan \theta$ and $\sin \theta$.

24. Prove that $\tan^2 A - \tan^2 B =$

$$\frac{\cos^2 B - \cos^2 A}{\cos^2 B \cos^2 A} = \frac{\sin^2 A - \sin^2 B}{\cos^2 A \cos^2 B}$$

25. If two triangles are equiangular, prove that the ratio of the corresponding side is same as the ratio of corresponding medians.

or

In a right angle triangle prove that square of hypotenuse is the sum of the square of the sides.

26. The sum of the 3rd and 7th terms of an A.P is 6 and their product is 8. Find the sum of first 16 terms of the A.P.
27. Draw a pair of tangents to a circle of radius 5 cm which are inclined to each other at an angle of 60° .

or

Draw a circle of radius 6 cm. From a point 10 cm away from its centre, construct the pair of tangents to the circle and measure their lengths.

28. Find the coordinates of the centre of the circle passing through the points (0, 0), (-2, 1) and (1, 2). Also, find its radius.
29. The marks obtained by 200 students in a test were recorded as follows:

Marks %	No. of students
10 – 20	7
20 – 30	11
30 – 40	20
40 – 50	46
50 – 60	57
60 – 70	37
70 – 80	15
80 – 90	7

Draw the cumulative frequency curve ogive for the given data and use it to find the median.

30. A vessel is a hollow cylinder fitted with a hemispherical bottom of the same base. The depth of the cylinder is 5.5m and the diameter of hemisphere is 3.5 m. Calculate the volume and the internal surface area of the solid.

or

From a solid cylinder whose height is 8 cm and radius 6 cm, a conical cavity of height 8 cm and of base radius 6 cm, is hollowed out. Find the volume of the remaining solid correct to two places of decimals. Also find the total surface area of the remaining solid. [Take $\pi = 3.1416$]



General Instructions:

- (i) The question paper comprises of two sections: Section A and Section B.
- (ii) All questions are compulsory. However, internal choice has been provided in two questions of three marks each and one question of five marks. Only one option in such questions is to be attempted.
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- (vii) Question numbers 22 to 27 are two marks questions based on practical skills. These are to be answered in brief.

Section A

1. The radius of curvature of a spherical mirror is 20 cm. What is its focal length?
2. Name the longest cell present in the human body.
3. Where should an object be placed in front of a concave mirror of focal length 20 cm so as to obtain a two times magnified real image?
4. Draw magnetic field lines around a bar magnet.
5. Given one example of each:
 - (a) Metal having valency 2.
 - (b) Non-metal having valency 2.
 - (c) Element with completely filled outermost shell.
 - (d) Element with three shells, having 4 electrons in the outermost shell.
6. It is desired to obtain an erect image of an object, using concave mirror of focal length of 12 cm.
 - (a) What should be the range of distance of an object placed in front of the mirror?
 - (b) Will the image be smaller or larger than the object? Draw ray diagram to show the formation of image in this case.
 - (c) Where will the image of this object be, if object is placed 24 cm in front of the mirror? Draw ray diagram for this situation. Also justify your answer.

7. An electric lamp of 100Ω , a toaster of 50Ω and a water filter of 500Ω are connected in parallel to a 220 V source. What is the resistance of an electric iron connected to the same source that takes as much current as all three appliances, and what is the current through it?

or

- How can three resistors of 2Ω , 3Ω and 6Ω be connected to give a total resistance of
- (a) 4Ω
 - (b) 1Ω
8. Why are we looking at alternate sources of energy?
 9. Write balanced equation for each of the following:
 - (a) Chlorine gas burns in hydrogen gas to give hydrogen chloride.
 - (b) Hydrogen sulphide burns in air to give water and sulphur oxide.
 10. What is the chemical formula for Plaster of Paris? How is it prepared? State the common and chemical names of the compound formed when Plaster of Paris is mixed with water.

11. (a) What are amphoteric oxides? Choose the amphoteric oxides from amongst the following oxides:
 Na_2O , ZnO , Al_2O_3 , CO_2 , H_2O
- (b) Why do non-metals not displace hydrogen from dilute acids?
12. Subramanyam is a progressive farmer and entrepreneur of Tamil Nadu. Once he went to 'Agriculture Fair' where he saw a working model of windmill. Subramanyam got a windmill installed in his farm. Now he could produce sufficient electric power needed for his factory as well as farming activities.
 - (a) What do you mean by wind energy?
 - (b) Briefly explain the working of a windmill to produce electricity.
 - (c) What values were shown by Subramanyam?
13. What is vegetative propagation? State any two advantages and two disadvantages of this method.
14. Explain two main advantages associated with water harvesting at the community level.

or

- Why is conservation of wildlife considered important for us? Give any two reasons.
15. How did Mendel explain that it is possible that a trait is inherited but not expressed in an organism?

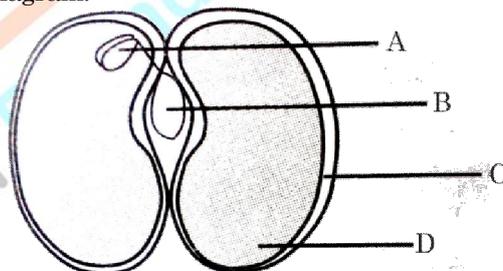
16. (a) Define electric resistance of a conductor.
 (b) List two factors on which resistance of a conductor depends.
 (c) Resistance of a metal wire of length 1 m is $104\ \Omega$. If the diameter of the wire is 0.15 mm, find the resistivity of the metal.
17. Draw the ray diagram in each of the following cases to show the position and nature of the image formed when the object is placed:
 (a) at the centre of curvature of a concave mirror.
 (b) between the pole P and focus F of a concave mirror.
 (c) between the pole P and infinity of a convex mirror.
 (d) at $2F$ of a convex lens.
 (e) at infinity in front of concave lens.
18. An organic compound A on heating with concentrated H_2SO_4 form a compounds B which on addition of one mole of hydrogen in presence of Ni form a compounds C. One mole of compound C on combustion forms two moles of CO_2 and 3 moles of H_2O . Identify the compounds A, B and C and write the chemical equations of the reactions involved.

or

- (a) What is a homologous series? State any two characteristics of a homologous series.
 (b)(i) How are carboxylic acids different from mineral acids from the ionisation point of view?
 (ii) Describe an activity to find out how ethanoic acid reacts with sodium carbonate. Name the gas evolved. How can it be tested?
19. The atomic number of Cl is 17. On the basis of this information, answer the questions that follow:
 (a) Write the electronic configuration of Cl.
 (b) Find the valency.
 (c) To which group does it belong?
 (d) Identify the type of ion it will form.
 (e) Write down the formula of the compound it form with other elements.
20. Explain the method of sex determination in humans.
21. With the help of suitable examples explain the terms phototropism, geotropism and chemotropism.

Section B

22. Draw a schematic diagram of a circuit consisting of a battery of three cells of 2V each, a $5\ \Omega$ resistor, an $8\ \Omega$ resistor, and a $12\ \Omega$ resistor, and a plug key, all connected in series.
23. Why does the white light not split into different colours when it passes through a glass slab?
24. Three tubes marked A, B and C were filled with 10 mL of water. 1, 2 and 3 g of calcium hydrogencarbonate respectively were added to tubes A, B and C. The solid was completely dissolved by stirring, 2 mL of soap solution was added to each test tube and the tubes were shaken vigorously for 2 minutes each. Which of the tubes contains the minimum length of foam?
25. A zinc wire discharges that green colour of ferrous sulphate and an iron wire discharges the blue colour of copper sulphate. Arrange the metals in decreasing order of reactivity. Give the chemical equations for the reactions also.
26. What is meant by asexual reproduction? Explain any two.
27. Identify the parts A, B, C, D correctly in the given diagram.





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Section A

1. Define 1 dioptre of a lens.
2. What happens at the synapse between two neurons?
3. A dentist uses a mirror in front of a decayed tooth at a distance of 4 cm from the tooth to get a four times magnified erect image in the mirror. Use mirror formula to find the focal length and nature of the mirror used.
4. Why don't two magnetic lines of force intersect?
5. When potassium iodide solution is added to a solution of lead (II) nitrate in a test tube, a precipitate is formed.
 - (a) What is the colour of this precipitate?
 - (b) Name the compound precipitated.
 - (c) Write the balanced chemical equation for this reaction.
 - (d) What type of reaction is this?
6. To construct a ray diagram we use two rays of light which are so chosen that it is easy to determine their directions after reflection from the mirror. Choose these two rays and state the path of these rays after reflection from a concave mirror. Use these two rays to find the nature and position of the image of an object placed at a distance of 15 cm from a concave mirror of focal length 10 cm.
7. What are the advantages of connecting electrical devices in parallel with the battery instead of connecting them in series?

or

What is (a) the highest, (b) the lowest, total resistance that can be secured by combination of four coils of resistance 4Ω , 8Ω , 12Ω and 24Ω ?
8. Explain, how does a hydro power plant produce electricity.
9. Name one example each to represent the following reactions.
 - (a) Combination reaction
 - (b) Decomposition reaction
 - (c) Displacement reaction
 - (d) Double displacement reaction.
10. How is bleaching powder prepared? Why does bleaching powder
 - (a) smell strongly of chlorine?
 - (b) not dissolve completely in water?
11. Differentiate between metal and non-metal on the basis of their chemical properties.
12. If you go to remote countryside, you still find shopkeepers selling curd or hot milk in kulhads. People living in cities may find them strange. If we think deeply they have advantages too. In cities, ton of packing and serving material is made of plastic. Plastic is a non-biodegradable substance. It does not decompose even after long standing. That creates an environmental problem. On the other hand, kulhads are made of clay and are biodegradable. In fact one of our former railway ministers advocated the use of kulhads at railway stations and inside the trains.
 - (a) What is the best way if at all we have to use plastic material in catering?
 - (b) What adverse effect takes place due to our changed attitude in modern times?
 - (c) What values were expressed by the railway minister in introducing kulhads?
13. With the help of a diagram describe the structure of a flower.
14. What measures have been taken for the conservation of wildlife? State any three measures.

or

Burning of fossil fuels causes lots of air pollution. Generally these fossil fuels are used in our vehicles.
 - (a) As an aware citizen, list ways to reduce air pollution caused due to vehicles.
 - (b) Write two harmful effects other than air pollution, that are caused due to burning of fossil fuels.
15. List and describe any two evidences for evolution.
16.
 - (a) State Ohm's law. Express it mathematically.
 - (b) Write symbols used in electric circuits to represent:
 - (i) Variable resistance
 - (ii) Voltmeter

17. State the law of refraction of light that defines the refractive index of a medium with respect to the other. Express it mathematically. How is refractive index of any medium A with respect to a medium B related to the speed of propagation of light in two media A and B? State the name of this constant when one medium is vacuum or air?

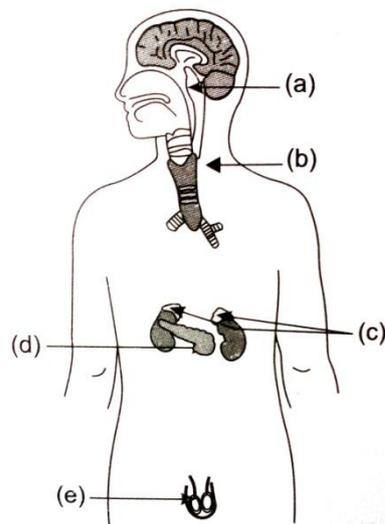
The refractive indices of glass and water with respect to vacuum are $\frac{3}{2}$ and $\frac{4}{3}$ respectively. If the speed of light in glass is $2 \times 10^8 \text{ m s}^{-1}$, find the speed of light in (i) vacuum, (ii) water.

18. (a) Why does carbon form compounds mainly by covalent bonding?
 (b) List any two reasons for carbon forming a very large number of compounds.
 (c) An organic acid X is a liquid which often freezes during winter time in cold countries, has the formula, $\text{C}_2\text{H}_4\text{O}_2$. On warming with ethanol in the presence of a few drops of concentrated sulphuric acid, a compound Y with a sweet smell is formed.
 (i) Identify X and Y
 (ii) Write a chemical equation for the reaction involved.

or

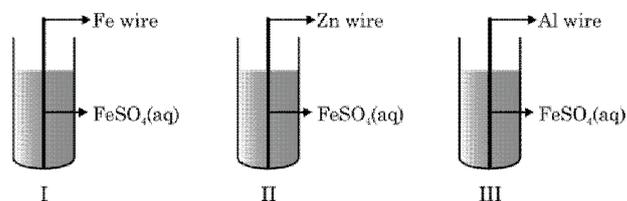
- (a) Give reasons for the following:
 (i) Unsaturated hydrocarbons show addition reaction.
 (ii) Conversion of ethanol to ethanoic acid is an oxidation reaction.
 (iii) Alcohol supplied for industrial purpose is mixed with copper sulphate.
 (b) Write chemical equation to represent the preparation of ethane from ethanol.
 (c) State the role of concentrated sulphuric acid in an esterification reaction.
19. An element is placed in 2nd group and 3rd period of periodic table, it burns in the presence of oxygen to form basic oxide.
 (a) Identify the element.
 (b) Write the electronic configuration.
 (c) Write the balanced equation when it burns in the presence of air.
 (d) Write a balanced equation when this oxide is dissolved in water.
 (e) Draw the electron dot structure for the formation of this oxide.
20. (a) What is meant by natural selection? Explain.
 (b) Why are thorn of Bougainvillea plant and a tendril of Passiflora plant considered homologous.

21. (a) Identify the endocrine glands a, b, c, d in the given diagram.
 (b) List the functions of parts 'd' and 'e'.



Section B

22. To study the dependence of current (I) on the potential difference (V), a student recorded his observations in tabular form. Based on the observations he obtained a V-I graph which was a straight line passing through the origin. What does this straight line signify?
23. Why does white light split into different colours when passes through a glass prism?
24. Acetic acid was taken in a test tube and sodium metal added through a thistle funnel.
 (a) Which gas is evolved in the experiment?
 (b) Write one test to identify the gas.
25. Wires of Fe, Zn and Al were dipped in solutions of FeSO_4 in three different test tubes as shown below.



In which of the test tubes, the green colour disappears? What is the new colour attained? Write the equation for the reaction in test tube III.

26. Draw a well-labelled diagram to show various stages of binary fission in Amoeba.
27. Explain the mode of reproduction in yeast. Draw a neat and well-labelled diagram.



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Section A

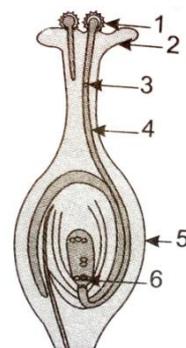
1. Find the power of a concave lens of focal length 2m.
2. What are plant hormones?
3. (a) The refractive index of glass is 1.5, what is meant by this statement?
(b) Refractive indices of glass, kerosene and water are 1.5, 1.44 and 1.33 respectively. Arrange them in ascending order of their optical density.
4. List the properties of magnetic field lines.
5. Calcium is an element with atomic number 20. Give reason for each of the following questions:
(a) Is calcium a metal or non-metal?
(b) Will its atomic radius be larger or smaller than that of potassium with atomic number 19?
6. An object 4 cm in height, placed at 15 cm in front of a concave mirror of focal length 10 cm. At what distance from the mirror should a screen be placed to obtain a sharp image of the object. Calculate the height of the image.
7. State Ohm's law. How can it be verified experimentally? Does it hold good in all conditions? Comment.

or

Express Joule's law of heating mathematically. What is the resistance of 12 m wire having radius 2×10^{-4} m and resistivity $3.14 \times 10^{-8} \Omega \cdot \text{m}$?

8. Mention advantages and disadvantages of producing hydro electricity by building dams on rivers.

9. Name the substance oxidised and reduced, and also identify the oxidising agents and reducing agents in the following reactions:
(a) $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$
(b) $3\text{MnO}_2 + 4\text{Al} \rightarrow 3\text{Mn} + 2\text{Al}_2\text{O}_3$
(c) $\text{H}_2\text{S} + \text{SO}_2 \rightarrow \text{S} + \text{H}_2\text{O}$
10. (a) Define olfactory indicators. Name two substances which can be use as olfactory indicators.
(b) Choose strong acids from the following: CH_3COOH , H_2SO_4 , H_2CO_3 , HNO_3
11. State reasons for the following:
(a) Metals are good conductors of heat.
(b) Addition of some silver to pure gold for making ornaments.
(c) Inability of non-metals for displacing hydrogen from dilute sulphuric acid.
12. Mr Kumar visited the newly built bungalow of his friend Mr Kamat. There he observed that a big solar geyser was installed on the roof. Mr Kumar told his friend that he was unable to appreciate why he was miser in spending money on installation of electric geysers in each bath room. Mr Kamat not only explained him the reason rather convinced Mr Kumar too to install one in his house.
(a) Explain the values exhibited by Mr Kamat.
(b) List the advantages of solar geyser that convinced Mr Kumar to adopt it.
13. In the given figure label the parts numbered 1 to 6.



14. Students were asked to conduct a survey and prepare a report on the number of tigers in Rajasthan. They were surprised to see that very less number of tigers are there.
(a) What caused this sharp decrease in number of tigers?
(b) How is the small number of surviving tigers a cause of worry from the genetics point of view?
(c) As a student, what measures can you take to create awareness among people?

or

Why should we conserve forests? Suggest any two ways to conserve forests.

15. How do Mendel's experiments show that traits are inherited independently? Depict with the help of a cross.
16. What is meant by electric current? Name and define its SI unit. In a conductor electrons are flowing from B to A. What is the direction of conventional current? Give justification for your answer.
A steady current of 1 ampere flows through a conductor. Calculate the number of electrons that flow through any section of the conductor in 1 second. (Charge on electron = 1.6×10^{-19} coulomb)
17. (a) State the laws of refraction of light. Explain the term absolute refractive index of a medium and write an expression to relate it with the speed of light in vacuum.
(b) The absolute refractive indices of two media 'A' and 'B' are 2.0 and 1.5 respectively. If the speed of light in medium 'B' is 2×10^8 m s⁻¹, calculate the speed of light in
(i) vacuum
(ii) medium 'A'
18. When ethanol reacts with ethanoic acid in the presence of conc. H₂SO₄, a substance with fruity smell is produced. Answer the following:
(a) State the class of compounds to which the fruity smelling compound belong. Write the chemical equation for the reaction and write the chemical name of the product formed.
(b) State the role of conc. H₂SO₄ in this reaction.
- or**
- (a) Why does carbon form compounds mainly be covalent bonding?
(b) Why do covalent compounds have low melting and boiling points?
(c) What is an ester? Describe an activity to form an ester.
19. Consider the following elements:
₂₀A, ₈B, ₁₈C, ₁₆D, ₄E, ₂F
Answer the following giving reasons:
Which of the above elements you would expect to be
(a) very stable
(b) in group 2 of the periodic table.
(c) in group 16 of the periodic table.
(d) What type of bond will be formed when the element A reacts with B? Explain.
20. What are the various evidences in favour of evolution?
21. If you happen to touch a hot object what would be your response? With the help of well labelled diagram explain how this response happen.

Section B

22. Distinguish between an ammeter and a voltmeter by giving two points of difference between them.
23. What colours does the acronym VIBGYOR represent?
24. Acetic acid was taken in a test tube and sodium carbonate solution added through a funnel.
(a) Which gas is evolved in the experiment?
(b) Write one test to identify the gas.
25. In the electrolysis of water:
(a) Name the gas collected at the cathode and the anode.
(b) Why is the volume of gas collected at one electrode is double of the other?
(c) Why are a few drops of dil. H₂SO₄ added to the water?
26. What is a seed? What is its significance?
27. Draw a well labelled diagram to show budding in yeast.



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Section A

1. Define real image of an object.
2. Which part of the brain maintains posture and equilibrium of the body?
3. A beam of light passes from air to a substance X. If angle of incidence is 45° and angle of refraction is 30° , calculate the refractive index of the substance X.
4. Write the rule which determines the direction of magnetic field developed around a straight conductor, when current is passed through the conductor.
5. An element X belongs to 13th group of the Periodic Table. Find its Valency. What will be the formula of its sulphate?
6. State the type of mirror preferred as (i) rear view mirror in vehicles, (ii) shaving mirror. Justify your answer giving two reasons in each case.
7. Two lamps rated 100 W, 220 V and 25 W, 220 V are connected in parallel to 220 V supply. Calculate the total current through the circuit.

or

Two resistors, with resistances 5Ω and 10Ω respectively are to be connected to a battery of emf 6 V so as to obtain.

- (a) minimum current flowing (ii) maximum current flowing
- (b) How will you connect the resistances in each case.
- (c) Calculate the total current in the circuit in the two cases.

8. Explain the term 'tidal energy'. How is electricity produced from tidal energy?
9. You must have tasted or smelt the fat containing food material left for a long time. Such foods taste and smell bad. What is the reason for this? Name to the phenomenon responsible for it. List two measures for its prevention.
10. How are bases different form alkalis? Are all bases alkalis?
11. In the electrolysis of water:
 - (a) Name the gas collected at the cathode and the anode.
 - (b) Why is the volume of gas collected at one electrode is double of the other?
 - (c) Why are a few drops of dil. H_2SO_4 added to the water?
12. Faisal knew the principle of conservation of energy. One day a declamation contest was held in his school. The topic was "Energy crisis and its possible solution". Faisal was confused. He thought when total energy of universe is constant then where is the question of energy crisis. He posed the same question in his science class. His science teacher explained the paradox.
 - (a) What do you mean by the term 'energy crisis'?
 - (b) Why do we talk about energy crisis inspite of the law of conservation of energy?
 - (c) What characteristic was exhibited by Faisal?

13. Discuss briefly the different types of reproduction.
14. How are different stakeholders dependent on forests? Mention any four of them.

or

Suggest any two ways to strike a balance between environment and development.

15. The gene for blue eyes (b) is recessive to gene for brown eyes (B). The given figure shows both brown and blue eyes.

BB	bb
Bb	?
bb	Bb
Bb	Bb
Bb	bb

- (a) Write the symbol of the mother (genotype).
- (b) What is the genotype of grandmother and grandfather?
- (c) What is the percentage of individuals with brown and blue eyes respectively?
16. (a) State Joule's law of heating. Find an expression for amount of heat produced.
- (b) A torch bulb is rated 6 V and 750 mA. Calculate the energy consumed by the bulb in 4 hours.

17. (a) "A convex lens can form a magnified erect as well as magnified inverted image of an object placed in front of it." Draw ray diagram to justify this statement stating the position of the object with respect to the lens in each case.
 (b) An object of height 4 cm is placed at a distance of 20 cm from a concave lens of focal length 10 cm. Use lens formula to the image formed.
18. (a) Give a chemical test to distinguish between saturated and unsaturated hydrocarbon.
 (b) Name the products formed when ethane burns in air. Write the balanced chemical equation for the reaction showing the type of energies liberated.

or

A carbon compound 'P' on heating with excess conc. H_2SO_4 forms another carbon compound 'Q' which on addition of hydrogen in the presence of nickel catalyst forms a saturated carbon compound 'R'. One molecule of 'R' on combustion forms two molecules of carbon dioxide and three molecules of water. Identify P, Q and R and write chemical equations for the reactions involved.

19. Atomic numbers of a few elements are given below: 10, 20, 7, 14
 (a) Identify the elements.
 (b) Identify the group number of these elements in the Periodic Table.
 (c) Identify the period of these elements in the Periodic Table.
 (d) What would be the electronic configuration for each of these elements?
 (e) Determine the valency of these elements.
20. What is meant by trait of a species? Distinguish between acquired and inherited traits giving an example of each.
21. What is synapse? In a neuron cell how is an electrical impulse created and what is the role of synapse in this context?

Section B

22. What is the material of connecting wires being used by you and why? Would you prefer a thick conducting wire or a thin conducting wire?
23. What is a triangular prism? Define angle of prism.
24. You have been provided with three test tubes. One of them contains distilled water and the other two contain an acidic solution and a basic solution respectively. If you are given only red litmus paper, how will you identify the contents of each test tube?
25. (a) Describe an activity to show that metals are good conductors of electricity.
 (b) Account for the following:
 (i) Hydrogen gas is not evolved when a metal reacts with nitric acid.
26. Differentiate between binary fission and budding.
27. What precautions must be taken to study the embryo of a dicot seed?



General Instructions:

This question paper consists of three sections:

- Section A — Reading (20 marks)
Section B — Writing & Grammar (30 marks)
Section C — Literature (30 marks)
[Text books (20 marks)]
[Novel (Long Reading Text)](10 marks)]

1. Attempt all questions.
2. Do not write anything in the question paper.
3. All the answers must be correctly numbered as in the question paper and written in the answer sheets provided to you.
4. Attempt all questions in each section before going on the next section.
5. Read each question carefully and follow the instructions.

Section A – Reading

1. **Read the following passage carefully.**

The ship that had been used by the Italian explorer Christopher Columbus on his mission to discover America, was found 500 years later, by a team headed by Barry Clifford who had gone on a mission to locate the wreck. According to the team, the ship is lying at the bottom of the sea, off the coast of Haiti. According to Barry Clifford, leader of the reconnaissance mission, all the geographical underwater topography and archeological evidence strongly suggests that this wreck is of Columbus' famous flagship '*Santa Maria*'.

To corroborate his findings and for identifying the wreck of '*Santa Maria*', he has been making use of data available from separate discoveries made by other archaeologists in 2003. Their findings had suggested that the region was also the probable location of Columbus' fort. With the help of his own information and that of the earlier expedition about the location of Columbus' fort, Clifford was able to use Columbus' diary and thus work the exact location of the wreck.

To further strengthen his search for the exact location of the ship underwater, he has carried out an examination of underwater photographs which were taken during the initial survey carried out in 2003. Combined with data from the recent reconnaissance, unearthed by divers who have gone down to the site of the wreck, Clifford's team has been able to identify the wreck that of '*Santa Maria*'.

To further strengthen their find, Clifford's team has been using marine magnetometers, side-scan sonar equipment, in addition to divers. They have investigated more than 400 sea bed anomalies and narrowed down their search of the area where the *Santa Maria* is actually resting, to a tiny portion of the area.

The *Santa Maria* was the flagship of Columbus' small fleet that set sail from Spain in August 1492, under the sponsorship of King Ferdinand and Queen Isabella I. The voyage aimed to find a westward route to China, India and the gold and spice islands of the East. But the land the sailors set eyes on, was an island in the Caribbean.

Answer the following questions briefly.

- (a) What is the finding made by Barry Clifford and his team?
- (b) How has Clifford corroborated his findings?
- (c) What was the find of the archeologists and how did this help Clifford?
- (d) What equipment did Clifford use for his reconnaissance?
- (e) How have the team narrowed down their search?
- (f) What position did the '*Santa Maria*' occupy in Columbus' fleet?
- (g) What was the aim of Columbus' expedition?
- (h) Who were his sponsors and what was the outcome of the expedition?

2. **Read the following passage carefully.**

With the fuel crisis looming over the Indian economy that refuses to be wished away, any news about alternative fuels makes news. The latest finding is by some scientists who claim to have used sunlight, water, and carbon dioxide to make 'green' jet fuel. The group consists of a consortium of European scientists who have demonstrated the production of a jet fuel, using this form of concentrated solar energy.

The key component of the production process is a high-temperature solar reactor developed by the group led by Professor Aldo Steinfeld. The first step in this process begins at 1500 Celsius. This heating up is done using concentrated solar radiation as the energy source. The net result that follows from this step is the production of a synthesis gas. This gas is basically a mixture of hydrogen and carbon-monoxide. This gas serves as a precursor of liquid hydrocarbon fuels. Before launching their product into the public domain, Professor Steinfeld and his team have tested their fuel by making it perform 240 consecutive cycles. The yield from these cyclic exercises, they claim, has led to the production of 750 litres of syngas which was then shipped in a pressurized container from Zurich, where it was produced, to Amsterdam. A Shell research centre in the city then converted the solar syngas into kerosene using an established method.

With the experiment proving successful one would suppose that the next step would be a trial run on aircraft. But instead, Steinfeld and his team are not letting their product leave the laboratories. The next phase of their research includes an attempt to optimize solar reactor technology to enable them to produce their energy source efficiently. It requires that the enhanced heat transfer and fast reaction kinetics are maximized to enable the solar-to-energy conversion work with efficiency.

Another aspect that this group of scientists is looking at is the possibility of obtaining their feedstock of CO₂ from fuel gas separation, or directly from the atmospheric air. This will eliminate the second stage of the production process. In the long run, Steinfeld and his team hope to reach a 15% efficiency with the so far-driven cyclic process. In terms of actual production, according to him, this would work out to 20,000 litres of kerosene per day, produced in a solar tower, covering one square kilometre.

Answer the following questions in about 30-40 words.

- What is the alternative fuel produced by Dr Aldo Steinfeld and his team?
- What steps have the team taken before launching their product publicly?
- Why is the product not let out of laboratories?
- How do they plan to eliminate the current second stage of the production?

Do as directed.

- The word 'Consortium' used in the passage means.....
 - a concert
 - a gathering of likeminded people
 - a little page boy
 - a boy following a marriage party
- The term 'Precursor' denotes a.....
 - deadly curse
 - the moment before the curse
 - an event that precedes the main one
 - destiny
- When a thing is said to 'Optimize' it means.....
 - it is grown in size
 - it is utilized to its full capacity
 - it is used by optical companies
 - another name for spectacles
- The term 'Eliminate' means.....
 - to completely sideline or remove something
 - to end something in stages
 - to minimize something
 - to increase something to the maximum

Section B – Writing & Grammar

- You are Madhav/Madhu, 4/7, Wonderful Street, Bikaner. Write in about 100-120 words, a letter to the Editor of a newspaper on how conventional outdoor games have been replaced by mobile phones, video games, internet and play station.

or

Write a letter to the Editor of a national daily on the introduction of the 'odd-even' scheme for cars plying on Delhi roads in order to check pollution levels in the city, on a trial basis. Do you support it? Express your opinion in about 100-120 words. You are Lokesh/Vidhi, 18, Lodhi Road, New Delhi.

- Write the story in about 200-250 words using the hints given below:**

Sitting near a window — enjoying the rain — cars splash — pitter patter on the windowpane — Khar-khar of the FM station — unable to access Radio Stations — the nearby patch of green — vibrant — soothing smell of the wet soil — noise of footsteps — bell rings....

or

Write a story in 200-250 words beginning with "Neeru was getting late for work. She grabbed her bag from the chair and rushed towards the door when"

- Read the paragraph given below. Fill in the blanks by choosing the most appropriate words/phrases from the given options.**

They place (a) _____ much emphasis on material things. People (b) _____ poor self-esteem judge a person's (c) _____ by his possessions, not by who he is. The reality is material possessions (d) _____ assess human character.

	I	II	III	IV
(a)	so	very	a lot	too
(b)	with	having	owning	possessing
(c)	worthy	worth	worth while	character
(d)	shall not	could not	cannot	will not

- The following paragraph has not been edited. There is one error in each line. Write the error and the correction in your answer sheet against the correct blank number. The first one has been done as an example.**

Finally, one day, Sunita ran out in patience. Enough was enough. She decide to confront Suruchi. She asked her why she was been nasty to her. She had done nothing to offend you. She knew the confrontation will mean the end of their relationship.

Error	Correction
e.g., in	of
(a) _____	_____
(b) _____	_____
(c) _____	_____
(d) _____	_____

7. Rearrange the following words/phrases to make meaningful sentences:

Detective / below / go / written / through the / story
e.g., *Go through the detective story written below.*

- (a) our / is / talented swimmers /full of/ country
- (b) not / utilised / potential / fully / their / is
- (c) academic subjects / other activities / take precedence / over / in schools
- (d) perception / address / system / to / needs / education / skewed / our / this

Section C – Literature

8. Read the following extract and answer the questions given below:

"That fellow," asked the postmaster "is he mad?"
"Who, sir? Oh, yes," answered the clerk "no matter what the weather is, he has been here every day for the last five years. But he doesn't get many letters."

Questions:

- (a) Who does the postmaster refer to as 'mad man'?
- (b) Why does he refer to him as a mad man?
- (c) What has Ali been waiting for the last five years?
- (d) What is the attitude of the post-office employees towards Ali?

or

"And as he put his head into that dreadful hole, And as he slowly drew up, snake-easing his shoulders, and entered farther,
A sort of horror, a sort of protest against his withdrawing into that horrid black hole, Deliberately going into the blackness, and slowly drawing himself after,
Overcame me now his back was turned."

Questions:

- (a) Where did the snake put its head?
- (b) What does the phrase 'snake-easing his shoulders' mean?
- (c) Against what was the poet protesting?
- (d) Why do you think he uses the word 'Protest'?

9. Answer any four of the following questions in 30-40 words each:

- (a) What bewildered and puzzled the postmaster?
- (b) What strange thing did Louisa Mebbin notice after the tiger was killed? Explain what had happened?
- (c) In what way is the play "The Dear Departed" satirical?
- (d) Why were the ghosts going on strike?
- (e) How did Brutus justify Caesar's assassination?

10. Answer one of the following questions in about 100-120 words:

Why does Patol Babu walk away without taking his payment for his role? What does this reveal about his character?

or

How does the poem 'Not Marble, Nor the Gilded Monuments' strengthen the speaker's claim about the longevity of written word?

11. Answer one of the following questions in about 200-250 words?

What were the reactions of Mr Anagnos to 'The Frost King' story? What was Helen's reaction on the events which followed?

or

What was unique about Ms Sullivan's style of teaching that made Helen's education a pleasant experience?

or

Describe in brief the 'final outcome' as depicted in the Afterword' of the "Diary of a Young Girl".

or

Why did Anne write a letter that upset her father immensely? What did she learn from the incident?



General Instructions:

This question paper consists of three sections:

Section A — Reading	(20 marks)
Section B — Writing & Grammar	(30 marks)
Section C — Literature	(30 marks)
[Text books	(20 marks)]
[Novel (Long Reading Text)]	(10 marks)]

1. Attempt all questions.
2. Do not write anything in the question paper.
3. All the answers must be correctly numbered as in the question paper and written in the answer sheets provided to you.
4. Attempt all questions in each section before going on the next section.
5. Read each question carefully and follow the instructions.

Section A – Reading

1. **Read the following passage carefully.**

Mt Everest has continued to attract climbers ever since June 8, 1924, when two members of a British expedition, George Mallory and Andrew Irvine, had first attempted to climb the summit. The two men were last spotted 'going strong' for the top, until the clouds, perpetually swirling around Everest, engulfed them. They then vanished.

Mallory's body was not found for another 75 years, until May 1999. Ten more expeditions were to follow before the historic climb of Everest for the first time, by Edmund Hillary, a New Zealand beekeeper, and Tenzing Norgay, an acclaimed Sherpa climber. The news of the climb reached England at the time of the coronation of Queen Elizabeth II and Hillary became famous overnight, in all of the British Empire. Tenzing on the other hand, became a symbol of national pride across both Nepal and India.

Today, Mt Everest is drawing attention for all the negative reasons. The entire route that the climbers follow to reach the top is littered with rubbish and in sore need of cleaning up. The rubbish strewn all over the mountain includes oxygen cylinders, human waste, and even climbers' bodies which do not decompose in the extreme cold.

Under the new regulations passed by the Nepalese government, climbers scaling Everest will have to bring back eight kilograms of garbage. This amount is exclusive of the climbers' own garbage weight. This measure has been taken to restore the pristine nature of the peak.

The rule will be applicable to those climbers of Mt Everest who will ascend beyond Everest's Base Camp, from April onwards. Climbers who fail to comply with this new rule are likely to be charged and legal action would be taken against them. The

action would involve the paying of a fine, or other penalty.

Expeditions returning back to the base will have to submit their trash at an office to be set up in the precincts of the Everest Base Camp.

Answer the following questions briefly.

- (a) When was the first attempt to scale Mt Everest made and by whom?
- (b) What was the outcome of the first expedition?
- (c) What was the climbing record before the first successful attempt?
- (d) Who were the first successful climbers of Everest?
- (e) Why is Everest drawing attention today?
- (f) What is the nature of the waste littering the mountainside?
- (g) What is the nature of the new regulation?
- (h) How were the first climbers of Everest rewarded?

2. **Read the following passage carefully.**

While it is a well known fact that yoga, certain kinds of music and some calming foods, are known to relieve stress, the latest trend is the search for certain scents with calming properties that can help a person to unwind and soothe the nerves.

One such scent that is now being touted as having calming properties, is lavender. It has long been a popular ingredient used in most spas as the scent is believed to help one sleep better. To test its properties one can opt for a lotion with lavender as its ingredient. An even better option is to spray the scent on the pillow for a sound sleep.

Everyone has heard of mint chutney that is served with samosas and pakoras, but few would think of applying a mint-based paste on one's body. Yet this is just what is recommended for those who would like a smooth and purifying effect on the mind, brought about by this application.

Citrus fruits are not only good for health but also serve as good mood lifters. Sniffing lemon zest is believed to soothe over stress and the smell of grapefruit is known to curb depression. Other advantages include memory enhancement from smelling oranges. Even the zest of an orange can make one feel energetic. Therapists also recommend that one can light an orange-scented candle by one's side, in the bath, and imbibe the same benefits.

For that nagging headache that comes on whenever you step out into the scorching sun, there is yet another cure available from the array of calming scents. According to some researchers

sniffing at a green apple can not only cure a headache, but also help alleviate it altogether.

The latest finding about the calming properties of scents has entered the realm of roses. Since time immemorial, the flower has been associated with happiness, love and joy. With this new finding, it will now embody an additional quality - that of relieving stress. The ideal way to prove it would be to use a rose-scented soap or massage with rose-scented body oil before going under the shower.

2.1 Answer the following questions in about 30-40 words.

- What does the latest research into scents reveal?
- What are the latest findings about the properties of lavender?
- How do citrus fruits help in calming the body?
- What are the properties of green apples?

2.2 Do as directed.

- The word 'calming' used in the passage denotes.....
 - composing oneself
 - decomposing oneself
 - making oneself sleepy
 - adding colour to one's life
- The word 'touted' in the passage expresses.....
 - winding a horse race
 - trying to promote something
 - giving away things
 - going on a fast walk
- When 'something is recommended' it is.....
 - widely criticized
 - re-used a second time
 - widely approved
 - started again
- 'A therapist is a person who
 - is an animal doctor
 - practices medicine without a degree
 - a mind doctor
 - is a doctor in theory

Section B – Writing & Grammar

- The supply of municipal water to your colony is very erratic. It comes only twice a day and that too for just two hours. Sometimes there is only a trickle. Write a letter in 100-120 words to the editor of a local daily describing the difficulties you are facing and asking the authorities to regulate and increase the water supply. You are Aruna/Arun, 112, Gulmohar Colony, Karnal.

or

You were one among a group of students who represented your state in a national youth exchange programme. It was an eye-opener which

made you realise the spirit of unity in diversity. Taking ideas from the MCB unit on National Integration along with your own ideas, write a letter to the editor of a newspaper in 100-120 words on the importance of National Integration. You are Maya/Mohan, 4, Rampur Road, Bareilly.

- Write the story in 200-250 words which begins as the following:**

Sita's village was situated on the bank of a river. It was a very calm river and had never flooded. But this year the rains poured and poured for days.....

or

The doorbell rang. Sunil opened the door. At first he could not recognise the tall and well-dressed man who stood before him. Then the man spoke and all of a sudden....

- Read the paragraph given below. Fill in the blanks by choosing the most appropriate options from the ones that follow.**

Alaska's size and climate make transportation (a) _____ challenge. Long ago, sledges pulled (b) _____ dog teams were the best way to travel (c) _____ native people. Though technology (d) _____ a difference, sledges have still not become redundant.

	I	II	III	IV
(a)	an	the	a	for
(b)	by	with	of	beside
(c)	by	to	for	with
(d)	had made	has made	made	makes

- The following passage has not been edited. There is one error in each line against which a black has been given. Write the incorrect word and the correction in your answer sheet against the correct blank number as given in the example. Remember to underline the word that you have supplied.**

The road to success is no a bed of roses. Only those who wade on hazards and hurdles can achieve successful. Set yourself clear goals and define precisely what you want to do. Goals provide direction for your behaviour and guide your actions or thoughts. Specific goals are better than general ones. Let every parts of your body is full of that idea. Winners do not do different things, they does things differently.

Error

e.g., no

- (a) _____
- (b) _____
- (c) _____
- (d) _____
- (e) _____
- (f) _____
- (g) _____
- (h) _____

Correction

not

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

7. **Read the following conversation and complete the passage given below. The first one is done for you.**

Mr Sharma : Doctor, what will the total expenses be?

Mr Sharma asked the doctor what the total expenses would be.

Doctor : You will have to pay only six lac.

Mr Sharma : Any concession?

Doctor : No.

Mr Sharma : But I cannot afford it.

The doctor answered (a) _____ Mr Sharma asked (b) _____ The doctor (c) _____.

Mr Sharma said (d) _____.

Section C – Literature

8. **Read the following extract and answer the questions given below:**

Our hearts you see not; they are pitiful;
And pity to the general wrong of Rome
As fire drives out fire, so pity pity –
Hath done this deed no Caesar.

Question:

- (a) Who is the speaker?
- (b) What does 'deed' mean here?
- (c) Why is the speaker's heart full of pity?
- (d) 'As fire drives out fire, so pity pity.' Explain.

or

Now the frog puffed up with rage.
"Brainless bird – you're on the stage –
Use your wits and follow fashion.
Puff your lungs out with your passion".

Question:

- (a) Why was the frog puffed up with rage?
- (b) Give the opposite of 'Brainless'.
- (c) What does the frog mean by 'you're on stage'?
- (d) What happened when the nightingale puffed up her lungs?

9. **Answer any four of the following questions in 30-40 words each:**

- (a) How does Patol Babu reconcile himself to the dialogue given to him?
- (b) Describe Michael's encounter with Black-Eyed Jed in the game, Wildwest.
- (c) What is ironic about the inscription on pedestal of the broken statue of Ozymandias?
- (d) In the poem, 'Mirror' who disturbs the mirror's meditation and how?
- (e) How is Victoria different from her mother?

10. **Answer one of the following questions in about 100-120 words:**

No crime ever goes unpunished. How was Caesar's assassination avenged by Mark Antony?

or

The mirror is the symbol of truth whereas candlelight and moonlight are called liars, which flatter the woman. Elaborate how flattery can be harmful and truth, even though cruel, is always pleasing at the end.

11. **Answer one of the following questions in about 200-250 words?**

Anne became hopeful of the end of Nazi rule in Germany when an attempt on Hitler's life was made. Comment.

or

Surprisingly, Anne's life in the Annexe was very busy. Comment.

or

Attempt a character sketch of Miss Sullivan.

or

What difficulties were faced by Helen Keller at Cambridge School?



General Instructions:

This question paper consists of three sections:

Section A — Reading	(20 marks)
Section B — Writing & Grammar	(30 marks)
Section C — Literature	(30 marks)
[Text books	(20 marks)]
[Novel (Long Reading Text)]	(10 marks)]

1. Attempt all questions.
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4. Attempt all questions in each section before going on the next section.
5. Read each question carefully and follow the instructions.

Section A – Reading

1. **Read the following passage carefully.**

When Rajat, a student studying for the Class X Board examination who had put on six kilograms during preparation leave, approached Dr. Anoop Mishra of the Fortis Hospital for advice, he was told that the lack of physical activity was the primary cause of weight gain. He further advised him to follow a few significant tips.

As Rajat's appetite had gone up and he had begun to snack frequently, Dr. Mishra asked him to give up the habit and have small meals at frequent intervals. He was also told not to skip a meal. In case, he still felt the urge to snack, he was advised to have sprouts and salads in lieu of snacks loaded with fat, and eat fruit in place of snacks with refined sugars. To avoid the temptation of munching on biscuits, chips and namkeens, he was advised to munch carrots, cucumber and fruits.

To keep up his metabolism and be able to concentrate for longer hours on his books, he was advised to avoid heavy meals, especially late at night. He needs to expose his body to sunlight for at least fifteen minutes a day to imbibe Vitamin D, a good vitamin for regulation of weight and also for the brain.

When it came to cold drinks, Rajat was advised to drink toned milk and nimbu pani to help him get rid of untimely hunger pangs. Also green tea, he was told, was a metabolic booster and could be tried out.

As far as his study routine was concerned, Dr. Mishra advised him to take breaks frequently instead of sitting for long hours at a stretch as that could cause headaches. In case he did get a headache it was necessary to learn what had triggered it, and then try and avoid those things. The lighting of the room and placement of the chair was also important.

Above all, Rajat was advised to take regular exercise, as all work and no play makes Jack a dull boy.

Answer the following questions briefly.

- (a) Why did Rajat approach Dr Mishra?
- (b) What was Rajat advised to do instead of snacking?
- (c) What substitutes was Rajat advised in place of snacks?
- (d) How was he to overcome the temptation of eating biscuits and namkeens?
- (e) Why was Rajat asked to stay away from heavy meals late at night?
- (f) What kinds of cold drinks was Rajat permitted to have?
- (g) What was the cause of headache according to Dr Mishra?
- (h) Why should we expose ourselves to sunlight for fifteen minutes every day?

2. **Read the following passage carefully.**

As the harvest season sets in, villagers start trickling in to the temple at Sorikampatti village, 30 km from Madurai. They seek the blessings of the deity, before beginning the daily practice of jallikattu training. The tradition of Jallikattu goes back to a legend surrounding the majestic Kangayen bull, a premium local breed, and a legendary bull tamer Alagu Servai. He was poisoned to death by his fellow tamers as he had never failed in a game. His story is now part of the folklore of the region. This festival is held during harvest festivities in mid-January. The sport derived its name from the term 'salli' meaning coins, in reference to the coins tied to the raging bull's horns that tamers tried to pocket in daring feats.

In recent years several cruel practices have crept in. Bull owners took to feeding their animals arrack and rubbing chilli on their bodies to make them more aggressive and the game more exciting. This had led to a growing ire among animal rights bodies who have demanded an end to this cruel sport. The tussle came to an end with the Supreme Court imposing a ban on the custom of Jallikuttu. Earlier, in 2006, the Madras High Court bench had imposed a ban on the event citing cruelty to animals. After a long-drawn-out battle between the Jallikuttu supporters and the detractors from the Animal Welfare Board in India, in 2009, the Tamil Nadu Jallikuttu Act was passed by the state government making it compulsory that the event is held under supervision of the district collector, Superintendent of Police and the Animal Welfare Board representatives.

While Jallikattu organisers are willing to abide by the rules for holding the sport, animal rights activists maintain that irrespective of rules and regulations, the sport cannot be held without perpetrating cruelty to the animals. They claim that cruelty is an inherent element of the sport. The men who grapple with the animals claim that a Kangayen bull is bred solely for the sport. With tractors replacing the bull in the fields, there is no reason other than Jallikattu to rear them. With the ban on the sport, it is feared that soon the breed would become extinct.

2.1 Answer the following questions in about 30-40 words.

- (a) What is Sorjkampattu? What is unique about it?
- (b) What is the legend surrounding the sport?
- (c) What measures have been taken to ban the sport?
- (d) What is the plea taken by jallikattu enthusiasts as regards continuation of the sport?

2.2 Do as directed.

- (a) a The word 'premium' as used in the passage means.....
 - i. above the usual ii. the only reason
 - iii. a payment iv. the chief person
- (b) The word 'aggressive' is used in the passage to denote.....
 - i. an animal that is forceful and attacking
 - ii. a situation that makes one run
 - iii. an animal engaged in sport
 - iv. a runaway animal
- (c) The word 'detractors' in the passage refers to.....
 - i. users of tractors
 - ii. those who find fault
 - iii. those who go against the established norm
 - iv. a person with a similar viewpoint
- (d) When a thing is 'extinct' it is.....
 - i. intact ii. broken
 - iii. lost forever iv. out of favour

Section B – Writing & Grammar

- 3. Write a letter to the Manager of a leading bookstore requesting him to send you a few books which you require immediately. You can send him demand draft in advance of a certain amount, promising to pay the balance amount, on delivery of the books, in cash. You are Vineet/Vineeta and your address is 45, Wonderful Street, Mussoorie, UK.

or

You and your family are planning to spend the weekend at a seaside resort. Write a letter to the Manager of the resort asking him to make reservations. Let him know the date and time of your arrival and the date of departure, what type of rooms you want and also ask as to how much the weekend will cost. Also ask about the activities and places of interest near the resort. You are Vineet/Vineeta and your address is 45, Wonderful Street, Mussoorie, UK.

- 4. Write the story in 200-250 words which begins as the following:

Old man — four sons — youngest fell into bad company — old man worried — learnt the hard way —

or

A woman was cutting grass in the woods with her companion — the Sun was about to set — when suddenly — she heard a shriek —

- 5. Complete the following paragraph by choosing the appropriate options from the ones given below. Write your answers in the answer sheet against the correct blank numbers. Do not copy the entire paragraph.

Many contemporary dancers are trained daily (a) _____ classical ballet. This helps to keep up (b) _____ the technicality of the given choreography. These dancers tend (c) _____ follow ideals of efficient bodily movements. They (d) _____ undergo rigorous training to master this dance form.

	I	II	III	IV
(a)	in	for	at	of
(b)	to	of	with	for
(c)	at	to	of	as
(d)	will	would	have to	had to

- 6. The following paragraph has not been edited. There is one error in each marked line. Write the error and the correction in your answer sheet against the correct blank number. The first one has been done as an example.

She kindles a third match. Again the flame shot up and
 now she was sitting under a most beautiful Christmas
 tree, far larger and far more beautifully decked up
 than
 the one she had seen last Christmas by the
 glass doors on the rich man's house.

Error	Correction
e.g., kindles	kindled
(a) _____	_____
(b) _____	_____
(c) _____	_____
(d) _____	_____

7. Rearrange the following words/phrases to make meaningful sentences:

Detective / below / go / written / through the / story
e.g., *Go through the detective story written below.*

- (a) Sunderban tigers / facing / shortage / a / are / natural fodder / of
- (b) a period / over / of time / they / weight / losing / have been
- (c) the / of / Sunderban tiger / length / a / come down / has
- (d) threat / moreover, / poachers / also / are / they / from / facing

Section C – Literature

8. Read the following extract and answer the questions given below:

Most of the time I meditate on the opposite wall,
It is pink, with speckles. I have looked at it so long
I think it is a part of my heart. But it flickers.
Faces and darkness separate us over and over.

Questions:

- (a) What does 'I' refer to? How does it meditate on the opposite wall?
- (b) What do the 'pink speckles' refer to?
- (c) Why does the wall flicker?
- (c) How has the wall become a part of the speaker?

or

"I despised myself and the voices of my accursed human education.
And I thought of the albatross
And I wished he would come back, my snake."

Questions:

- (a) What does the 'albatross' here symbolise?
- (b) Why does the poet curse his education?
- (c) Why does the speaker want the snake to come back?
- (d) What does 'despised' mean?

9. Answer any four of the following questions in 30-40 words each:

- (a) Why does the poet refer to the Judgment Day in the concluding couplet of his Sonnet 55?
- (b) How differently did the frog and the other creatures react to nightingale's voice?
- (c) Describe Lavinia's Ouija board party.
- (d) Describe the movement of the snake as he came down to drink water. Why does the poet feel that he must stand and wait to fill his pitcher?
- (e) How do we know that Patol Babu was a perfectionist?

10. Answer one of the following questions in about 100-120 words:

How do you identify yourself with the woman's plight in the poem 'Mirror'? Deduce a moral philosophy to guide you.

or

Caesar paid dearly for his arrogance and ambition. Justify.

11. Answer one of the following questions in about 200-250 words?

How does Anne feel about living in the Secret Annexe?

or

What were the economic and social conditions during the war?

or

What role does Kate Adams play in Helen's life?

or

Describe Helen Keller's love for History and Literature.



General Instructions:

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[Text books	(20 marks)]
[Novel (Long Reading Text)]	(10 marks)]

1. Attempt all questions.
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4. Attempt all questions in each section before going on the next section.
5. Read each question carefully and follow the instructions.

Section A – Reading

1. **Read the following passage carefully.**

The hopping kangaroo is a familiar sight in every snapshot relating to Australia. Members of the kangaroo family can be as small as a rat or as big as a man. Kangaroos are found mainly in Australia, Tasmania and New Guinea. Kangaroos, which are big-footed marsupials that evolved in Australia, use their short front legs like arms. The man-sized kangaroos of Australia are capable of speeding up to 88 km/hr for short distances, their means of locomotion being their powerful hind legs, which carry them over the ground in jumps of 9 m or more at a time.

Weighing around 70 kg, they have an average lifespan of around six to eight years and a maximum lifetime of 20 years. When bothered by predators, kangaroos often head for the water, standing submerged to the chest, and attempting to drown the attacker by holding him under water. Another defensive technique is to get their back to a tree and kick at their adversary with their clawed hind feet, sometimes with sufficient force to kill a man. Normally shy animals, they alert other kangaroos to danger by beating on the ground with their hind feet. This loud alarm signal carries over a long distance.

The tail is important for kangaroos. It holds them in balance and supports them when they sit or fight against other kangaroos. The kangaroo uses its short legs as arms. With them it scratches itself, cleans its fur and holds branches when it eats leaves. Kangaroos are marsupials and the females carry newborns in a pouch in front of their abdomens. The babies are born small and climb up into the safety of the pouch. There, for the next 225 days or so, they eat, sleep and grow. Once they reach full development, they leave the pouch. A young kangaroo that leaves the pouch is called a 'joey'. To keep from getting too hot, the kangaroos

take naps in the afternoon and do most of their grazing at night. But the best stay-cool secret of these creatures is the spit bath. Kangaroos drool and lick saliva all over their faces and bodies to cool down.

Answer the following questions briefly.

- (a) When followed by predators, kangaroos submerge_____.
- (b) The powerful hind legs help kangaroos to_____.
- (c) Kangaroos are mainly found in Australia and are_____.
- (d) They use their front legs to_____.
- (e) Kangaroos warn others of danger by_____.
- (f) The secret of kangaroos to stay cool is_____.
- (g) They use their tails to_____.
- (h) Before becoming 'joeys', the young ones stay in the_____.

2. **Read the following passage carefully.**

It is rare to find someone with good technical and communication skills. You can get far ahead of your colleagues if you combine the two early in your career. People will judge, evaluate, promote or block you, based on your communication skills. Since habits form by repeating both good and bad forms of communication, learn to observe great communicators and adopt their styles and traits – in written and verbal forms. The art of listening and learning from each and every interaction, is another secret recipe. Develop the subconscious habit of listening to yourself as you speak and know when to pause.

Learning what not to say is probably more important than learning what to say. As your career develops, you will realise that the wise speak less. Speak when you have value to add, else refrain. Poorly constructed e-mails with grammatical errors are acceptable between friends, but they should be seriously avoided while communicating formally with your seniors.

Avoid any communication in an emotional state when you might say things you might regret later. One unnecessary word uttered at the wrong time or place can ruin a relationship, career or even your life. Such is the power of words. If such a thing happens, you should immediately apologise, else it may haunt you for life.

Another problem to overcome is speaking too fast. Since our minds are working faster than our speech, we are inclined to speak fast. This does not necessarily mean that the person hearing it will get it any faster. On the contrary, it is always the reverse. So slow down, and think before you speak.

"When I get ready to speak to people," Abraham Lincoln said, "I spend two-thirds of the time thinking what they want to hear and one-third thinking what I want to say." Adding humour and wit is also essential. But realise that not all jokes are funny and observe certain boundaries. Never say anything that could offend. Remember you are not a comedian who must offend, as many people as you can to be witty.

2.1 Answer the following questions in about 30-40 words.

- (a) Why is it necessary to have good communication skills?
- (b) How can communication skills be developed?
- (c) What, according to the writer, should be avoided while communicating?
- (d) Why should one be careful when one tends to be humorous?

2.2 Answer the following questions by choosing the most appropriate options:

- (a) Wise speak less because they
 - i. know what not to say is important
 - ii. don't want to hurt the feelings of others
 - iii. speak only when they have value to add
 - iv. None of the above
- (b) We tend to speak fast because we
 - i. want the person who is listening to get what we have to say faster
 - ii. want the listener not to miss out on anything spoken by us
 - iii. speak faster than we think
 - iv. think faster than we speak
- (c) Which word means the same as 'utter' (para 2)?
 - i. flatter
 - ii. speak
 - iii. rot
 - iv. unique
- (d) Which word means the same as 'haunt' (para 2)?
 - i. hunt
 - ii. chant
 - iii. trouble
 - iv. avoid

Section B – Writing & Grammar

3. Influence of friends can have both positive and negative impact on the students. Write a letter to the editor of a national daily in 100-120 words discussing how we can make it more positive and productive. You are Arun/Aruna, 24, Mall Road, Chennai.

or

You are Manav/Manvi a student of ABC Public School and the member of the Cafeteria Supervision Committee, constituted by the Principal. Write a letter of complaint to the Principal of your school regarding the poor hygienic conditions in the cafeteria.

4. Write the story in 200-250 words which begins as the following:

He opened the factory door – peeped inside – some light – last shift over – could be thieves.....

or

Ritu is taking part in a story writing competition. Help her to finish the story. (200- 250 words)

On hearing a noise, Sheena ran outside her house. She saw a snake charmer surrounded by a group of children..... .

5. Complete the following paragraph by filling in the blanks with the help of the given options:

Reading (a) _____ or short story (b) _____ second language could dramatically (c) _____ physiological response to emotions such (d) _____ smiling.

	I	II	III	IV
(a)	the novel	an novel	a novel	novel
(b)	of	in	from	at
(c)	reduce	reduces	reduced	reducing
(d)	like	similar to	as	alike

6. The following paragraph has not been edited. There is one error in each line. Write the error and its correction as shown in the example.

One day a wonderful plate full in gold fell from Heaven into a courtyard of a temple at Banaras; so on the plate these words were inscribe. "A gift from Heaven to he who loves better." The priests at once made a announcement that every-day at noon, all which would like to claimed the plate should come.

Error	Correction
e.g., in	of
(a) _____	_____
(b) _____	_____
(c) _____	_____
(d) _____	_____
(e) _____	_____
(f) _____	_____
(g) _____	_____
(h) _____	_____

7. Rearrange the following words and phrases into meaningful sentences. The first one has been done as an example.

Detective / below / go / written / through the / story
e.g., Go through the detective story written below.

- (a) murder / that / investigating / Sherlock Holmes / finds / a / mystery
- (b) can be / two / blamed / persons / the murder / for
- (c) at the / there are / culprit / many clues / real / pointing
- (d) the / find / murderer? / you / who / real / out / is / can

Section C – Literature

8. **Read the following extract and answer the questions given below:**

I looked round, I put down my pitcher,
I picked up a clumsy log
And threw it at the 'water-trough' with a clatter.
I think it did not hit him.

Questions:

- (a) Why did the speaker put down the pitcher and look around?
- (b) What did the speaker do?
- (c) What does water-trough mean?
- (d) What was the poet trying to prove and to whom?

or

"In this bog I've long been known
For my splendid baritone
And, of course, I wield my pen
For Bog Trumpet now and then."

Questions:

- (a) What is 'Bog Trumpet'?
- (b) Who is the listener here?
- (c) How does the speaker try to impress the listener?
- (d) What does baritone mean?

9. **Answer any four of the following questions in 30-40 words each:**

- (a) Brutus's decision to permit Antony to speak in public proved fatal for him. Comment.
- (b) What are the two advanced intelligences on earth? How did reliving the accident help?
- (c) How does Shakespeare use omens or supernatural elements to create dramatic irony in the play?
- (d) How do the boys qualify as 'gentlemen of Verona' as called by the author?
- (e) What did the post office symbolise for Ali?

10. **Answer one of the following questions in about 100-120 words:**

'Two Gentlemen of Verona' have grown prematurely due to adverse circumstances. What values inspire you to be successful in your work?

or

The rich and powerful cannot be immortalised in statues and monuments but acts of kindness leave behind a legacy. Elucidate with reference to the poem 'Ozymandias'.

11. **Answer one of the following questions in about 200-250 words?**

What difficulties did Helen face in the first few weeks of her second year at the Gilman school? Why was she ultimately pulled out of the school though she had started adjusting with her new environment?

or

How was Helen benefited from the World Fair?

or

How had Anne described her feelings about her mother? Discuss.

or

Describe the transformation that took place in Anne during her stay in the Annexe.



General Instructions:

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 - (ii) Marks are indicated against each question.
 - (iii) Questions from serial number 1 to 7 are very short answer type questions. Each question carries one mark.
 - (iv) Question form serial number 8 to 18 are 3 marks questions. Answer of these questions should not exceed 80 words each.
 - (v) Questions form serial number 19 to 25 are 5 marks question. Answer of these questions should not exceed 100 words each.
 - (vi) Questions number 26 & 27 are map questions form History with 2 marks and Geography with 3 marks.
-
1. Define Plebiscite

or

Who were referred to as the colons?
 2. Define biogas.
 3. What was the SPA?
 4. Define Opposition.
 5. State two elements of democracy.
 6. What is a cheque?
 7. What are MNC's.
 8. What has been the positive impact of globalisation in India?
 9. What steps were taken by the French revolutionaries to create a sense of collective belonging, among the people of France?

or

State three characteristic of the Tonkin Free School.
 10. What were the economic implications of the First World War on India?
 11. What were the three experiments Gandhiji made with Satyagraha, in India?
 12. How has solar energy a bright future in India? Explain by giving three reasons.
 13. Mention three problems faced by the sugar industry.
 14. Discuss the advantages of Waterways.
 15. What functions are performed by the political parties?
 16. Why is democracy a better form of government?
 17. "Democracy means delay in decision making". What would you prefer: the quick decision of a dictator or the slow decision of democracy? What values do you inculcate from the above statement?
 18. What are informal sources of credit? Mention any two of its features.
 19. What are trade barriers? Why did the Indian government put up trade barriers after Independence?
 20. What factors contributed to the great economic hardships in 1830 s in Europe?

or

What were the various methods adopted by the French to dismantle the Chinese influence on Vietnam?
 21. What are the different ways by which the people are exploited in the market?
 22. What factors were responsible for the growth of nationalism in India?
 23. Suggest measures for the conservation of energy resources.
 24. How do industries cause water pollution? Mention five points.
 25. What are Pressure Groups? State four of their functions.
 26. Two features A and B are marked on the given political outline map of India. Identify these places with the help of the following information and write correct names on the lines marked in the map.
Refer Question Map Next Page.
(A) Place of Movement of Indigo Planters.
(B) Civil Disobedience Movement.
 27. Three features A, B and C marked on the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
Refer Question Map Next Page.
(A) Atomic Power Station.
(B) Cotton Textile Centre
(C) A Major Sea port in Gujarat.

Map Work

Q. 26



Q.27





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1. In which Congress Session was the demand of 'Purna Swaraj' adopted?
2. Name the major centre for the production of silk and woollen textiles.
3. What was the major reason for the protest in Bolivia?
4. Name two countries having a two party system.
5. Which element is often found missing from a non-democratic government?
6. Who issues currency notes in India?
7. What are trade barriers?
8. How did the print revolution create a new reading public and new culture of reading?
9. What was the Napoleonic Code?
or
Why did the French think that the colonies were necessary?
10. Why did Gandhiji support the Khilafat Movement?
11. What was the Simon Commission? Why was it boycotted by the Indians?
12. Distinguish between Conventional and Non-Conventional sources of energy.
13. What are Agro-based industries? Give examples.
14. Why is air transport more popular in the North-eastern parts of India? Give three reasons.
15. Discuss any three challenges faced by the political parties in India.

16. How can you say that democracy is being practised in a country?
17. What are Self-Help Groups? State any four functions?
18. What are formal sources of credit? Mention any two features of formal sources of credit.
19. How do MNCs spread their production?
20. How did culture play an important role in creating the idea of a nation in Europe?

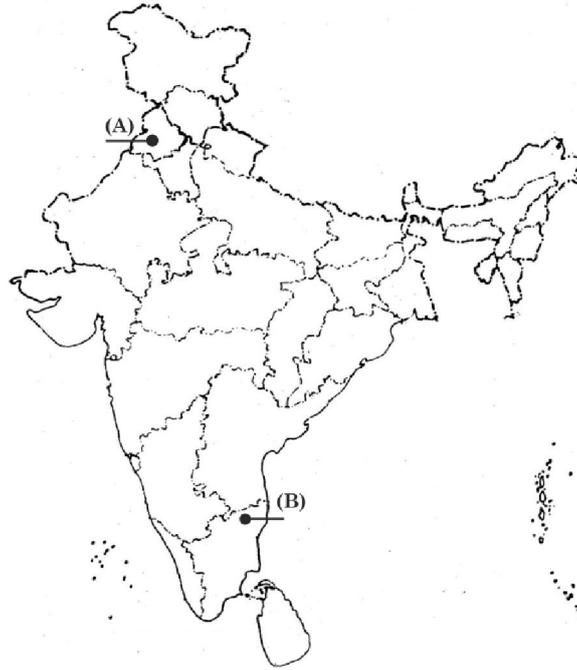
or

Why did the French policy makers want to educate the people of Vietnam?

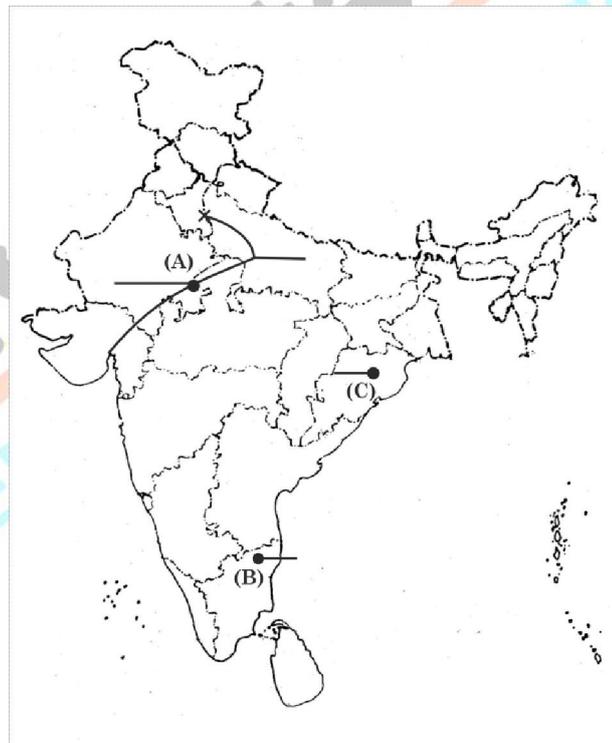
21. Explain the reactions of the Indians against the Rowlatt Act?
22. Discuss the major problems faced by the cotton textile industry in India.
23. Explain the improvements made in the functioning of the Indian Railways.
24. What are pressure groups?
25. What is the role of the opposition party in democracy?
26. Two features A and B are marked on the given political outline map of India. Identify these places with the help of the following information and write correct names on the lines marked in the map.
Refer Question Map Next Page.
(A) Jallianwala Bagh incident.
(B) Congress Session 1927.
27. There features A, B and C are marked on the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
Refer Question Map Next Page.
(A) Natural gas pipeline
(B) Software Technology park
(C) International Airport

Map Work

Q. 26



Q. 27





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- (vi) Questions number 26 & 27 are map questions form History with 2 marks and Geography with 3 marks.

1. Who was the chief architect of the unification of Germany?
2. Name the National Highway No.1 of India.
3. Who dismissed the Prime Minister and dissolved the popularly elected Parliament in Nepal in February 2005?
4. How many political parties have been registered by the Election Commission of India?
5. State two measures to sustain democracy.
6. What is the main source of credit for the rural households in India?
7. The investment made by the MNC is called
 - (a) Direct Investment
 - (b) Business Investment
 - (c) Foreign Investment
 - (d) Multinational Investment
8. Throw light on the duties of a consumer in the market place.
9. Why was Napoleonic rule opposed in the French colonies?

or

Explain any three ways how the school textbooks in Vietnam glorified the French and their rule.

10. What was the condition of the plantation workers during the colonial rule in India?
11. Mention any three efforts made by Gandhiji for the upliftment of the depressed classes.
12. Why is conservation of minerals necessary? State any two methods to conserve resources.

13. Mention the differences between the Agro-based and Mineral-based industries giving examples.
14. List the problems faced by the railways.
15. What are Sectional Interest Groups? Name any three of them.
16. Mention the features of One Party System.
17. Has democracy led to the development, security and dignity of the people? What values can be imbibed from this statement?
18. Why is it difficult for the poor household to get the benefits of the formal sources of credit?
19. Discuss the features of the World Trade Organisation.
20. What were the reasons for the conflict in the Balkans?

or

Assess the role of women in the Anti-Imperialist struggle in Vietnam.

21. What problems are faced by democracy?
22. What were the main features of the Civil-Disobedience Movement?
23. What are the potential sources of Biogas? State any four benefits of biogas.
24. How have the roadways an edge over the railways, in India?
25. Examine the methods used by the interests groups in India to put pressure on the government.
26. Two features A and B are marked on the given political outline map of India. Identify these places with the help of the following information and write correct names on the lines marked in the map.
Refer Question Map Next Page.
(A) Calling of the Non-Cooperation Movement.
(B) Congress session.
27. Three features A, B and C are marked on the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
Refer Question Map Next Page.
(A) Centre of Woollen Textile
(B) Major oil field
(C) Iron and Steel Plant

Map Work

Q. 26



Q.27





General Instructions:

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 - (v) Questions form serial number 19 to 25 are 5 marks question. Answer of these questions should not exceed 100 words each.
 - (vi) Questions number 26 & 27 are map questions form History with 1 mark each.
-
1. Which Treaty recognised Greece as an independent nation?

or

Who was the founder of the 'Hua Hao Movement'?
 2. Which region is known as the Ruhr of India?
 3. With what issue was the city of Cochabamba related to?
 4. Who allots the symbols to the political parties in India?
 5. What are civil liberties?
 6. What do you mean by "Terms of Credit"?
 7. Define 'Fair Globalisation'?
 8. Discuss any three functions of the Consumer Protection Council.
 9. What was the role of women in the nationalist struggles of Europe?

or

Discuss the steps taken by the French to solve the problem of plague in Vietnam.
 10. Explain any three problems faced by the peasants of Awadh.
 11. Discuss the Salt March undertaken by Gandhiji.
 12. Differentiate between Thermal and Hydro electricity.
 13. Why is the iron and steel industry called the basic industry?
 14. Why do the northern plains have the densest network of railways?
 15. How has the multiparty system strengthened democracy in India?
 16. State any three political outcomes of democracy.
 17. "Democracy is a kind but not the ideal form of government". Do you agree? What values are hidden in the statement?
 18. What are the reasons why banks are not willing to lend to certain borrowers?
 19. What conditions determine MNC setting up of production in other countries?
 20. Discuss the process of German Unification.

or

What developments in Japan and China inspired the Vietnamese nationalists?
 21. What factors had strengthened democracy in India?
 22. Examine the main features of the Gudem rebellion.
 23. Explain the development of non-conventional sources of energy in India.
 24. Suggest any five measures to reduce industrial pollution of fresh water.
 25. How was democracy established in Nepal?
 26. Two features A and B are marked on the given political outline map of India. Identify these places with the help of the following information and write correct names on the lines marked in the map.
Refer Question Map Next Page.
(A)The place where cotton mill workers organised satyagraha.
(B)The place where the Indian National Congress session was held.
 27. Three features A, B and C are marked on the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
Refer Question Map Next Page.
(A)Cotton textile centre
(B)Important iron and steel plant
(C)Coal mine

Map Work

Q. 26



Q. 27

