

This Question Paper contains 12 printed pages.

(Sections - A, B, C & D)

Sl.No. 000849

18 (E)

(FEBRUARY-MARCH, 2026)

24/12
26/13

Time : 3 Hours]

[Maximum Marks : 80

Instructions :

- 1) This question paper has four Sections A, B, C & D and Question Numbers from 1 to 54.
- 2) General options are given but for blind students internal option is given for figure/graph based questions.
- 3) In this question paper questions 14(B), 34(B), 43(B), 44(B), 47(B), 48(B) are only for Blind Students.
- 4) The numbers to the right represent the marks of the question.
- 5) Draw neat diagrams wherever necessary.
- 6) New section should be written in a new page. Write the answers in numerical order.
- 7) Calculator, digital watch or smart watch is not allowed.
- 8) Write in a clear legible handwriting.

SECTION - A

■ Answer the following as per instruction given:(Questions : 1 to 24) (1 mark each). [24]

■ Choose the correct option from the questions given below (Questions : 1 to 6). (1 mark each).

- 1) The graphs of equations $2x + 3y = 9$ and _____ represent coincident lines.
(A) $4x + 6y - 18 = 0$ (B) $-4x + 6y - 18 = 0$
(C) $4x + 6y + 18 = 0$ (D) $4x - 6y - 18 = 0$
- 2) If discriminant of quadratic equation $3x^2 - 4x + P = 0$ is 112, then $P =$ _____.
(A) -8 (B) 8
(C) 32 (D) -32



- 3) $2k+1, 13, 5k-3$ are three consecutive terms of an A.P. then $k =$ _____.
- (A) 9 (B) 4 ✓
(C) 17 (D) 13
- 4) The distance of the point $(-3, 5)$ from the origin is _____.
- (A) $\sqrt{17}$ (B) $\sqrt{14}$
(C) $\sqrt{34}$ (D) $\sqrt{2}$
- 5) $\sin^2 30^\circ =$ _____.
- (A) $\frac{1}{2}$ (B) 1 ✓
(C) $\frac{\sqrt{3}}{2}$ (D) $\frac{1}{4}$
- 6) For a grouped data $m - \bar{x} = 2$ and $m + \bar{x} = 12$, then $z =$ _____.
- (A) 1 (B) 7
(C) 11 (D) 32

■ Fill in the blanks with correct option as to make the given statement correct :
(Questions : 7 to 12) (1 mark each).

- 7) $\sqrt{7}$ is _____ number. (rational, irrational, whole)
- 8) Product of zeroes of $P(x) = x^2 - 5x + 6$ is _____. (6, 5, -6)
- 9) A balanced die is tossed once. The probability of getting 1 on it is
_____. ($\frac{1}{6}$, $\frac{1}{4}$, $\frac{3}{4}$)
- 10) If $\sin\theta = \cos\theta$, then $\tan\theta =$ _____. ($\sqrt{2}$, 1, $\frac{1}{\sqrt{2}}$)

11) _____ tangents can be drawn from the point lying in the exterior of the circle.

(2, 1, 0)

12) The modal class of the following frequency distribution is _____.

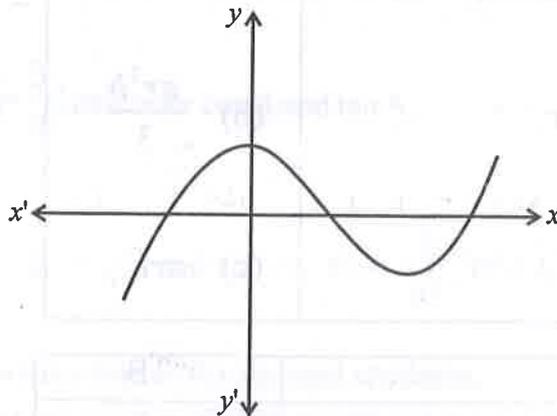
Class	40-50	50-60	60-70	70-80	80-90
Frequency	25	5	16	8	35

(60 - 70, 40 - 50, 80 - 90)

■ State whether the following statements are true or false : (Questions : 13 to 16)
(1 mark each)

13) H.C.F. (6, 72) = 6. \checkmark

14) (A) The question is for normal students.



As per given fig., $y = P(x)$. The graph has 1 zero.

14) (B) The question is only for blind students.

There are at most 2 zeroes for any cubic polynomial.

15) Pair of linear equations $x - y = 8$ and $3x - 3y = 16$ are consistent. \checkmark

16) The probability of an event which is sure to occur is 1. \checkmark

■ Answer the following in one sentence or one word or number: (Questions : 17 to 20). (1 mark each).

17) Find the sum of the first 50 positive integer.

18) PQRS is a cyclic quadrilateral $\angle P : \angle R = 2 : 3$. Find $\angle R$.

36

19) Aniket gets 20 marks out of 25 marks in unit test. What will be the probability of getting 20 marks.

20) Find the median of the given data.

3, 5, 1, 4, 5

17

■ Match the pairs : (Questions: 21 to 24) (1 mark each).

88
—
148

2
17
x4
—
68

	A	B
21)	Curved surface area of a cone	(a) $\pi r^2 h$
22)	Volume of cylinder	(b) $\frac{\pi r^2 h}{3}$
		(c) $\pi r l$

17 | 1418

	A	B
23)	$\frac{\text{Circumference of a circle}}{\text{Diameter of a circle}}$	(a) $\frac{\theta}{360^\circ}$
24)	$\frac{\text{Area of minor sector}}{\text{Area of a circle}}$	(b) $\frac{\pi r^2 \theta}{360^\circ}$
		(c) π

$\frac{\pi r^2 \theta}{180}$
—
JA

125
—
1020
—
1225

25
—
255
—
20
—
7



SECTION - B

- Answer any 9 out of 13 of the following questions from 25 to 37. (Each question carries 2 marks) [18]

25) Find the zeroes of the quadratic polynomial $4x^2 - 4x + 1$.

26) Find a quadratic polynomial whose sum and product of its zeroes are $\sqrt{2}$ and $\frac{1}{3}$ respectively.

27) Find the roots of the quadratic equation $100x^2 - 20x + 1 = 0$ by factorisation.

28) Find the 34th term of the AP : 7, 13, 19,

29) Find the sum of the first 22 terms of the AP : 8, 3, -2,

30) Find the distance between the points (3, 2) and (2, 3) using distance formula.

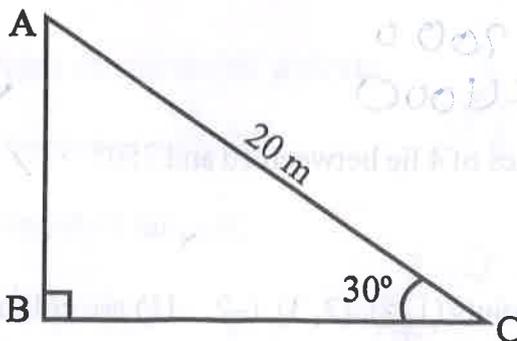
31) Find the coordinates of the midpoint of the points (4, -3) and (-3, 4).

32) If $\sin A = \frac{3}{4}$, calculate $\cos A$ and $\tan A$.

33) If $\tan(A+B) = \sqrt{3}$ and $\tan(A-B) = \frac{1}{\sqrt{3}}$; $0^\circ < A+B \leq 90^\circ$; $A > B$, find A and B.

34) (A) The question is for normal students.

A circus artist is climbing a 20 m long rope, which is tightly stretched and tied from the top of a vertical pole to the ground. Find the height of the pole, if the angle made by the rope with ground level is 30° (see the fig.)



34) (B) The questions are only for blind students.

Define :

- (i) Angle of Elevation
- (ii) Angle of Depression

35) Find the volume of copper rod with diameter 14 cm and length 8 cm.

36) The radius and the height of a cone is 7 cm and 24 cm respectively. Find the total surface area of a cone. 308

37) If for any frequency distribution $l = 3, f_1 = 8, f_0 = 7, f_2 = 2$ and $h = 2$. Then find the mode. $\frac{23}{7}$

SECTION - C

Answer any 6 out of 9 of the following questions from 38 to 46. (Each question carries 3 marks). [18]

38) Solve the following pair of linear equations by any suitable method.

$$\begin{aligned} s - t &= 3 \\ 2s + 3t &= 36 \end{aligned}$$

$t = 6, s = 9$

39) The ratio of incomes of two persons is 9 : 7 and the ratio of their expenditures is 4 : 3. If each of them manages to save ₹ 2,000 per month, find their monthly incomes.

$$\begin{aligned} x &= 2000 \\ y &= -4000 \end{aligned}$$

40) How many multiples of 4 lie between 10 and 250?

41) Determine if the points (1, 5), (2, 3), (-2, -11) are collinear.

NOT

42) In what ratio does the point $(-4, 6)$ divide the line segment joining the points $A(-6, 10)$ and $B(3, -8)$?

43) (A) The question is for normal students.

Prove the lengths of tangents drawn from an external point to a circle are equal.

43) (B) The questions are only for blind students.

Answer the following questions :-

- (i) How many tangent/s can be drawn at a point of the circle?
- (ii) How many maximum parallel tangents can a circle have?
- (iii) Define the secant of a circle.

44) (A) The question is for normal students.

Two concentric circles are of radii 40 cm and 41 cm. Find the length of the chord of the larger circle which touches the smaller circle.

2 cm

44) (B) The questions are only for blind students.

Define :

- (i) Point of contact of a circle
- (ii) Tangent of a circle
- (iii) Length of tangent

$$\begin{array}{r} 16 \overline{) 1641} \\ \underline{16} \\ 41 \\ \underline{41} \\ 0 \end{array}$$

$$\begin{array}{r} 16 \overline{) 1641} \\ \underline{16} \\ 41 \\ \underline{41} \\ 0 \end{array}$$

- Check last**
- 45) A student noted the number of cars passing through a spot on a road for 100 periods each of 3 minutes and summarised it in the table given below. Find the mode of the data.

Number of cars	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	7	14	13	12	20	11	15	8

- 46) One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting.

(i) a queen of black colour

(ii) not a face card.

(iii) a diamond.

SECTION - D

- Answer any 5 out of 8 of the following questions from 47 to 54. (Each question carries 4 marks). [20]

47) (A) The question is for normal students.

State basic proportionality theorem and prove it.

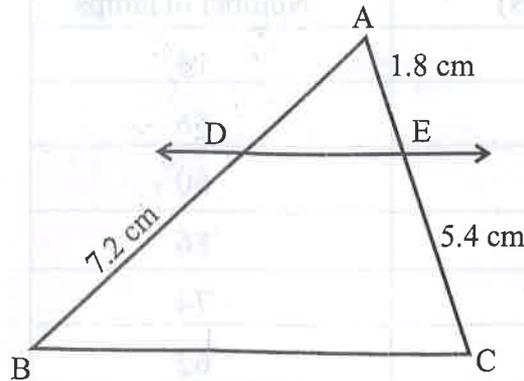
47) (B) The questions are only for blind students.

Fill in the blanks using the correct word given in brackets :

- (i) All _____ triangles are similar (isosceles, equilateral)
- (ii) All squares are _____ (similar, congruent)
- (iii) All right angled triangles are _____ (non similar, congruent)
- (iv) All circles are _____ (congruent, similar)

48) (A) The questions are for normal students.

$\triangle ABC$ is given, $DE \parallel BC$. Answer the following questions from fig.



- Find AD
- Find AB
- Find AC
- Which triangle is similar to $\triangle ADE$?

48) (B) The questions are only for blind students.

State whether the following statements are true or false.

- SSA (Side - Side - Angle) is one of the criteria for similarity of triangles.
 - All rhombus are always similar.
 - All circles are always similar.
 - All the similar triangles are always congruent.
- 49) A train travels a distance of 480 km at a uniform speed. If the speed had been 8 km/h less, then it would have taken 3 hours more to cover the same distance. Find the speed of the train.
- 50) Find 51st term and sum of first 51 terms of an AP whose second and third terms are 14 and 18 respectively.
- 51) Consider the following distribution of daily wages of 50 workers of a factory. Find the mean daily wages of the workers of the factory by using step-deviation.

Daily wages (in ₹)	Number of workers
500-520	12
520-540	14
540-560	8
560-580	6
580-600	10



52) The following table gives the distribution of the life time of 400 neon lamps:

Life time (in hours)	Number of lamps
1500-2000	14
2000-2500	56
2500-3000	60
3000-3500	86
3500-4000	74
4000-4500	62
4500-5000	48

$$\begin{array}{r} 437.5 \\ \hline 4 \overline{) 17500} \\ \underline{16} \\ 15 \\ \underline{12} \\ 30 \\ \underline{28} \\ 20 \end{array}$$

Find the median life time of a lamp.

7375

2725
123
125

53) Two dice, one blue and one grey, are thrown at the same time.

Find the probability of the numbers appearing on the top of two dice have.

- (i) sum of the numbers is 10. $\frac{12}{36}$
- (ii) sum of the numbers is 12. $\frac{1}{36}$
- (iii) sum of the numbers is less than or equal to 12. $\frac{10}{36}$
- (iv) same numbers on the both dice. $\frac{1}{6}$

$$\begin{array}{r} -52 \\ -12 \\ \hline 40 \end{array}$$

$$\begin{array}{r} -52 \\ -7 \\ \hline 0 \end{array}$$

54) A box contains 3 blue, 2 white and 4 red marbles. If a marble is drawn at random from the box, what is the probability that it will be.

- (i) white? $\frac{2}{9}$
- (ii) blue? $\frac{1}{3}$
- (iii) red? $\frac{4}{9}$
- (iv) green? $\frac{0}{9}$

$$\begin{array}{r} 12 \\ \hline 12 \end{array}$$

Handwritten calculations and a diagram of a box containing 3 stars (representing marbles).

$$\begin{array}{r} 206 \\ \hline 206 \end{array}$$

$$\begin{array}{r} 206 \\ \hline 206 \end{array}$$