GRADE
**9**

QUESTIONS **50**

TOTAL MARKS **100**

DURATION **60 mins**

**Instruction for Students:**

➲ Read the question carefully before answering.

➲ Each question has 4 options (A, B, C & D).

➲ **Grand Finale Marking System:-**
**Each correct answer carries 2 marks.**
**For each unattempted question, 2 marks will be deducted.**
**For each wrong answer, 2.5 marks will be deducted.**

➲ Grand Finale Result will be declared Online after 45 days from the exam date. To know your Result, login to www.neltas.com and use given Seat Number.

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1. **Which one of the following is an irrational number?**
   (A) $\sqrt{4}$
   (B) $\sqrt{8}$
   (C) $\sqrt{100}$
   (D) $\sqrt{0.64}$

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2. **Which is the decimal representation of $\frac{1}{4}$ ?**
   (A) 0.5
   (B) 0.2
   (C) 0.25
   (D) 0.02

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3. **Which of the following is true?**
   (A) Every whole number is a natural number.
   (B) Every integer is a rational number.
   (C) Every rational number is an integer.
   (D) Every integer is a whole number.

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4. **The value of $(25)^{3/2}$ is _____.**
   (A) 25
   (B) 5
   (C) 125
   (D) 225

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5. **The degree of $5x^3 - 7$ is _____.**
   (A) 0
   (B) 1
   (C) 2
   (D) 3

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6. **The value of $p(x) = 8x - 3x^2 + 3$ for $x = 0$ is ____.**
   (A) 3
   (B) 2
   (C) -3
   (D) -2

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**7.** On dividing $x^3 + 3x^2 + 3x + 2$ by $x$ we get remainder _____.
(A) 1
(B) 0
(C) -1
(D) 2

**8.** The factors of $2x^2 - 7x + 3$ are _____.
(A) $(x - 3)(2x - 1)$
(B) $(x + 3)(2x + 1)$
(C) $(x - 3)(2x + 1)$
(D) $(x + 3)(2x - 1)$

**9.** The equation of x –axis is of the form _____.
(A) $x = 0$
(B) $y = 0$
(C) $x + y = 0$
(D) $x = y$

**10.** Which of the following is not a linear equation in two variables?
(A) $ax + by = c$
(B) $ax^2 + by = c$
(C) $2x + 3y = 5$
(D) $3x + 2y = 6$

**11.** The ordered pair (m, n) satisfies the equation $ax + by + c = 0$ if _____.
(A) $am + bn = 0$
(B) $c = 0$
(C) $am + bn + c = 0$
(D) $am + bn - c = 0$

**12.** The degree of the polynomial $\sqrt{2}$ is _____.
(A) 1
(B) 0
(C) 2
(D) $\sqrt{2}$

**13.** The point (0, –3) lies on _____.
(A) negative side of y – axis
(B) negative side of x – axis
(C) positive side of x – axis
(D) positive side of y – axis

**14.** If (x+2, 4) = (7, y+2), then co-ordinates of (x, y) are _____.
(A) (9, 6)
(B) (5, 6)
(C) (9, 4)
(D) (5, 2)

**15.** The mirror image of the point (3, -4) in the x-axis is _____.
(A) (3, 4)
(B) (-3, 4)
(C) (3, -4)
(D) none of these

**16.** The points (–5, 2) and (2, –5) lie in _____.
(A) same quadrant
(B) II and III quadrant, respectively
(C) II and IV quadrant, respectively
(D) IV and II quadrant, respectively

**17.** In the given figure, x = _____.
(A) 120°
(B) 130°
(C) 140°
(D) None of these
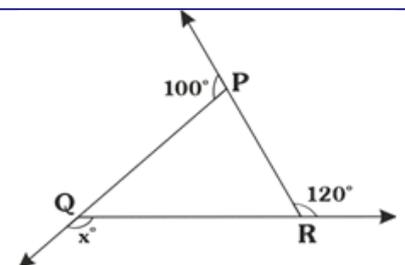
**18.** The ages of Priti and Hari are in the ratio 5:7. Four years later the sum of their ages will be 56 years. What are their present ages?
(A) 20, 26
(B) 22, 26
(C) 20, 28
(D) None of these

**19.** The sum of all the angles around a point is _____.
(A) 100°
(B) 180°
(C) 90°
(D) 360°

**20.** The measure of an angle which is equal to its complement is _____.
(A) 60°
(B) 30°
(C) 45°
(D) 15°

**21.** In the given figure value of x = _____.
(A) 25°
(B) 28°
(C) 30°
(D) 60°

The figure shows angles $(3x+20)°$ and $(4x-36)°$ at point O on line AB, with ray OC above.
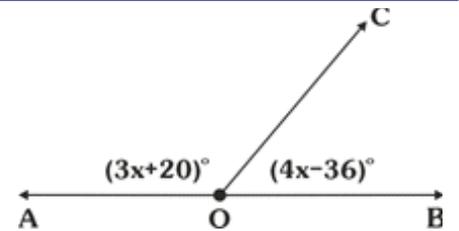
**22.** Line segment joining the midpoint of any side with the opposite vertex is _____.
(A) altitude
(B) median
(C) perpendicular bisector
(D) angle bisector

**23.** In triangle PQR, $\angle P = \angle R$, QR = 6 cm and PR = 5 cm, then length of PQ is _____.
(A) 5 cm
(B) 6 cm
(C) 4 cm
(D) none of these

**24.** In a triangle, the sum of its two sides is _____ third side.
(A) equal to
(B) less than
(C) greater than
(D) none of these

**25.** In triangles PQR and XYZ, PQ = PR, $\angle R = \angle X$ and $\angle Q = \angle Y$. The two triangles are _____.
(A) congruent but not isosceles
(B) isosceles but not congruent
(C) isosceles and congruent
(D) neither congruent nor isosceles

**26.** Three angles of a quadrilateral are 65°, 85° and 60°. The fourth angle is _____.
(A) 150°
(B) 145°
(C) 140°
(D) none of these

**27.** The _____ of any two adjacent angles of a parallelogram intersect at right angles.
(A) bisectors
(B) sides
(C) medians
(D) none of these

**28.** The angles of a quadrilaterals are in the ratio 3 : 4 : 5 : 6.
The respective angles of the quadrilaterals are _____.
(A) 60°, 80°, 100°, 120°
(B) 120°, 100°, 80°, 60°
(C) 120°, 60°, 80°, 100°
(D) 80°, 100°, 120°, 60°

**29.** If the diagonal of a rhombus are 18 cm and 24 cm respectively, then its side is equal to _____.
(A) 20 cm                                               (B) 16 cm
(C) 17 cm                                               (D) none of these

**30.** Parallelograms on the same base and between the same parallels are _____ in area.
(A) half                                                (B) one third
(C) one fourth                                          (D) equal

**31.** Area of a triangle is _____ the product of its base and the corresponding altitude.
(A) half                                                (B) one third
(C) one fourth                                          (D) equal

**32.** The longest chord of a circle is a _____ of the circle.
(A) diameter                                            (B) semi circle
(C) chord                                               (D) sector

**33.** The sum of either pair of opposite angles of a cyclic quadrilateral is _____.
(A) 180°                                                (B) 360°
(C) 90°                                                 (D) none of these

**34.** The length of a chord of circle is 4 cm. If its perpendicular distance from the centre is 1.5 cm, determine the radius of the circle.
(A) 2.5 cm                                              (B) 1.5 cm
(C) 6 cm                                                (D) 5 cm

**35.** The total surface area of cylinder of base radius 'r' and height 'h' is _____.
(A) $2\pi(r + h)$                                       (B) $2\pi r(r + h)$
(C) $3\pi r(r + h)$                                     (D) $4\pi r(r + h)$

**36.** A conical tent is 10 m high and the slant height of the tent is 26 m. Then the radius of the tent is _____.
(A) 26 m                                                (B) 28 m
(C) 24 m                                                (D) 27 m

**37.** A cuboidal water tank is 8 m long, 4 m wide and 2.5 m deep. How many litres of water can it hold?
(A) 80 litres                                           (B) 80000 litres
(C) 8000 litres                                         (D) 800000 litres

**38.** The surface area of a sphere is 5544 cm². Its radius is _____.
(A) 17 cm                                               (B) 21 cm
(C) 23 cm                                               (D) None of these

**39.** The mean of the first 10 even natural numbers is _____.
(A) 10                                                  (B) 11
(C) 12                                                  (D) 14

**40.** The mode of 22, 13, 14, 16, 22, x, 13, 11, 22, 13, 21 is 22. Find the value of x _____.
(A) 13                                                  (B) 21
(C) 16                                                  (D) 22

**41.** A box contains 5 red marbles, 6 white marbles and 4 green marbles. If a marble is drawn at random from the box, what is the probability that the marble will be red?

(A) $\dfrac{1}{6}$               (B) $\dfrac{2}{3}$

(C) $\dfrac{1}{3}$               (D) $1$

**42.** The dimensions of a wedding hall are 200 m, 60 m and 10 m.
How many people can be accommodated in the hall, if each requires 150 m³ of air?

(A) 600               (B) 800

(C) 1200              (D) None of these

Observe the given figure and answer questions 43 and 44.

**43.** Sin A = _____

(A) $\dfrac{2}{3}$               (B) $\dfrac{2}{5}$

(C) $\dfrac{3}{5}$               (D) $\dfrac{4}{5}$

**44.** Tan C = _____

(A) $\dfrac{3}{4}$               (B) $\dfrac{3}{5}$

(C) $\dfrac{4}{3}$               (D) $\dfrac{4}{5}$
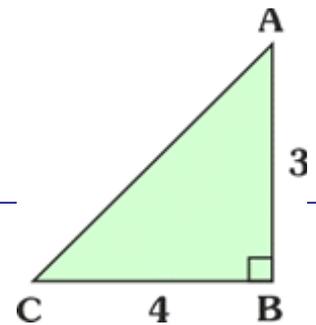
**45.** The mean of 10 observations is 22. Find the resulting mean if each observation is increased by 2.

(A) 11               (B) 24

(C) 44               (D) 20

**46.** PQRS is a parallelogram and PQ = 10 cm, PS = 6 cm then perimeter of parallelogram ABCD is _____.

(A) 16 cm             (B) 40 cm

(C) 32 cm             (D) 26 cm

**47.** In the above figure, ΔPQR = 100°, where P, Q and R are points on a circle with centre O. Find ΔPOR.

(A) 180°

(B) 140°

(C) 160°

(D) 200°
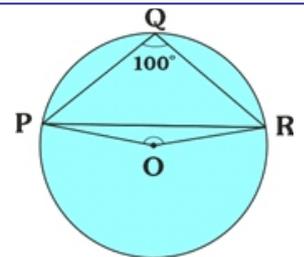
**48.** Evaluate: $\left(\dfrac{27}{125}\right)^{\frac{2}{3}} \div \left(\dfrac{9}{25}\right)^{\frac{3}{2}}$

(A) $\dfrac{5}{3}$               (B) $\dfrac{3}{4}$

(C) $\dfrac{3}{5}$               (D) $\dfrac{4}{3}$

**49.** What sum of money will amount to ₹5,445 in 2 years at 10% per annum compound interest?

(A) ₹4,500           (B) ₹6,500

(C) ₹5,500           (D) None of these

**50.** Simplify: $\sqrt[5]{16} \times \sqrt[5]{2}$

(A) $\sqrt{2}$              (B) $(2)^{-\frac{1}{2}}$

(C) 2                (D) $\dfrac{1}{2}$

# ANSWERS

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| B | C | B | C | D | A | D | A | B | B |

| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|
| C | B | A | D | A | C | C | C | D | C |

| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|
| B | B | B | C | B | A | A | A | D | D |

| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|---|---|---|---|---|---|---|---|---|---|
| A | A | A | A | B | C | B | B | B | D |

| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
|---|---|---|---|---|---|---|---|---|---|
| C | B | D | A | B | C | C | A | A | C |