



Standard 8

Time: 2.30 Hrs.

MATHS

Marks: 100

I. Choose the correct answer:

10×1=10

- 1) The number which is subtracted from $\frac{-6}{11}$ to get $\frac{8}{9}$ is _____.
 a) $\frac{34}{99}$ b) $\frac{-142}{99}$ c) $\frac{142}{99}$ d) $\frac{-34}{99}$
- 2) $(-2)^{-3} \times (-2)^{-2} =$ _____.
 a) $\frac{-1}{32}$ b) $\frac{1}{32}$ c) 32 d) -32
- 3) If the area of a square is $36x^4y^2$ then its side is _____.
 a) $6x^2y^2$ b) $8x^2y^2$ c) $6x^2y$ d) $-6x^2y$
- 4) Two similar triangles will always have _____ angles.
 a) acute b) obtuse c) right d) matching
- 5) What is the marked price of a hat which is bought for ₹ 210 at 16% discount?
 a) ₹ 243 b) ₹ 176 c) ₹ 230 d) ₹ 250
- 6) How many 2 digit numbers contain the number 7?
 a) 10 b) 18 c) 19 d) 20
- 7) $\sqrt{48}$ is approximately equal to _____.
 a) 5 b) 6 c) 7 d) 8
- 8) A cube has _____ faces.
 a) 5 b) 6 c) 12 d) 8
- 9) 15% of 25% of ₹ 10,000 = _____.
 a) 375 b) 400 c) 425 d) 475
- 10) How many outcomes can you get when you toss three coins once?
 a) 6 b) 8 c) 3 d) 2

II. Fill in the blanks:

5×1=5

- 11) The ones digit in the square of 77 is _____.
- 12) $6xy \times \underline{\hspace{2cm}} = -12x^3y$
- 13) X-axis and Y-axis intersect at _____.
- 14) 0.5252 is _____ %
- 15) The cross section of a solid cylinder is _____.

III. Say True or False:

5×1=5

- 16) All rational numbers have an additive inverse.
- 17) The co-ordinates of the origin are (1, 1).
- 18) The standard form of 2×10^{-4} is 0.0002.
- 19) In a right angled triangle, the hypotenuse is the greatest side.
- 20) The time taken for ₹ 1,000 to become ₹ 1,331 at 20% p.a. compounded annually is 3 years.

IV. Match the following:

4×1=4

- 21) Area of the sector of a circle - $\frac{1}{2} \times h \times (a + b)$
- 22) Circumference of a circle - $\frac{1}{2} \times b \times h$
- 23) Area of trapezium - $2\pi r$
- 24) Area of triangle - $\frac{\theta^\circ}{360^\circ} \times \pi r^2$

V. Answer the following: (any 10)

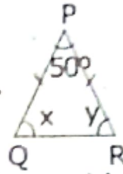
10×2=20

- 25) Write the decimal form of the following rational numbers: (i) $\frac{13}{4}$ (ii) $1\frac{2}{5}$
- 26) Find the cube root of 27000.
- 27) A spinner of radius 7.5 cm is divided into 6 equal sectors. Find the area of each of the sectors.
- 28) Verify Euler's formula for Faces = 4, Vertices = 4, Edges = 6.
- 29) What is 25% of 30% of 400?

V8M

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- 30) Find the product of $(2x+3)(2x-4)$.
 31) Divide: $(5y^3-25y^2+8y)$ by $5y$
 32) Find the quadrants without plotting the points on the graph sheet.
 $(3, -4), (5, 7), (2, 0), (-3, -5)$
 33) The price of a raincoat was slashed from ₹ 1,060 to ₹ 901 by a shopkeeper in the rainy season to boost the sales. Find the rate of discount given by him.



- 34) Find the unknown.

- 35) Check whether given sides are the sides of right angled triangles, using Pythagoras theorem. 8, 15, 17
 36) Shanthi has 5 chudithar sets and 4 frocks. In how many possible ways, can she wear either a chudithar or a frock?
 37) A safety locker in a jewel shop requires a 4 digit unique code. The code has the digits from 0 to 9. How many unique codes are possible?

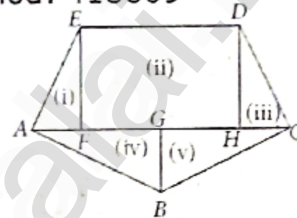
VI. Answer the following: (any 8)

8×5=40

- 38) Simplify: $\left[\frac{4}{3} + \left(\frac{8}{-7}\right)\right] + \left[\frac{3}{4} \times \frac{4}{3}\right] + \left[\frac{4}{3} \times \left(\frac{-1}{4}\right)\right]$

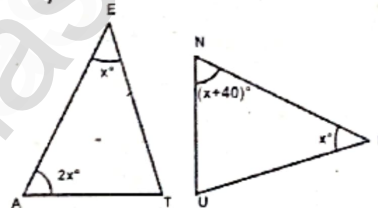
- 39) Find the square root by long division method: 418609

- 40) Find the area of an irregular polygon field whose measures are given in figure.



- 41) The Income of a person is increased by 10% and then decreased by 10% find the change in his income.

- 42) In the given figure if $\triangle EAT \sim \triangle BUN$ find the measure of all angles.



- 43) In class VIII, a math club has four members M, A, T and H. Find the number of different ways, the club can elect (i) a leader (ii) a leader and an assistant leader.
 44) Verify the distributive property $a \times (b+c) = (a \times b) + (a \times c)$ for the rational numbers $a = \frac{-1}{2}$, $b = \frac{2}{3}$ and $c = \frac{-5}{6}$.

- 45) i) Solve for x : $\frac{2^{2x-1}}{2^{x+2}} = 4$

ii) Write in scientific notation (i) 467800000000 (ii) 0.000001972.

- 46) For the sectors with given measures, find the length of arc, area and perimeter ($\pi = 3.14$). Central angle 45° , $r = 16$ cm.
 47) Identify the errors and correct them.
 (i) $6xy+3xy = 9x^2y^2$ (ii) $m(4m-3) = 4m^2-3$ (iii) $(4n^2)-2n+3 = 4n^2-2n+3$
 48) Ram deposited 'x' number of ₹ 2000 notes, 'y' number of ₹ 500 notes, 'z' number of ₹ 100 notes in a bank and Velan deposited '3xy' times of amount of what Ram had deposited. How much amount did Velan deposit in the bank?

VII. Answer the following:

2×8=16

- 49) a) Plot the following points in a graph sheet.

$(4, 3), (-4, 5), (-3, -6), (5, -2), (6, 0), (0, -5)$

(OR)

- b) Draw the graph of the following equation: $y = 6$

- 50) a) Construct the following quadrilateral with the given measurements and also find their area PLAY, PL = 7 cm, LA = 6 cm, AY = 6 cm, PA = 8 cm and LY = 7 cm.

(OR)

- b) Construct a trapezium BOAT in which \overline{BO} is parallel to \overline{TA} , $BO = 7$ cm, $OA = 6$ cm, $BA = 10$ cm and $TA = 6$ cm. Also find its area.