

Standard 8

MATHS

Time: 2.30 Hrs.

Marks: 100

I. Choose the best answer:

9×1=9

- 1) The standard form of the sum $\frac{3}{4} + \frac{5}{6} + \left(\frac{-7}{12}\right)$ is _____.
- a) 1 b) $\frac{-1}{2}$ c) $\frac{1}{12}$ d) $\frac{1}{22}$
- 2) 0.000000002020 in scientific form is _____.
- a) 2.02×10^9 b) 2.02×10^{-9} c) 2.02×10^{-8} d) 2.02×10^{-10}
- 3) The product of $7p^3$ and $(2p^2)^2$ is _____.
- a) $14p^{12}$ b) $28p^7$ c) $9p^7$ d) $11p^{12}$
- 4) 12% of 250 litre is the same as _____ of 150 litre.
- a) 10% b) 15% c) 20% d) 30%
- 5) A fruit vendor sells fruits for Rs. 200 gaining Rs. 40. His gain percentage is _____.
- a) 20% b) 22% c) 25% d) $16\frac{2}{3}\%$
- 6) Two similar triangles will always have _____ angles.
- a) acute b) obtuse c) right d) matching
- 7) The hypotenuse of a right angled triangle of sides 12 cm and 16 cm is _____.
- a) 28 cm b) 20 cm c) 24 cm d) 21 cm
- 8) How many outcomes can you get when you toss three coins once?
- a) 6 b) 8 c) 3 d) 2
- 9) How many 2 digit numbers contain the number 7?
- a) 10 b) 18 c) 19 d) 20

II. Fill in the blanks:

5×1=5

- 10) The standard form of $\frac{58}{-78}$ is _____.
- 11) The multiplicative inverse of -1 is _____.
- 12) The longest chord of a circle is _____.
- 13) A cube has _____ faces.
- 14) Loss or gain percentage is always calculated on the _____.

III. True or False:

5×1=5

- 15) The average of two rational numbers lies between them.
- 16) The additive inverse of $\frac{-11}{-17}$ is $\frac{11}{17}$.
- 17) The cube of 24 ends with the digit 4.
- 18) $8x^3y \div 4x^2 = 2xy$
- 19) In a right angled triangle, the hypotenuse is the greatest side.

IV. Match the following:

5×1=5

- 20) Circumference of a semicircle - $20x^2y - 20x$
- 21) Area of a quadrant of a circle - $-12y^3$
- 22) $4y^2 \times (-3y)$ - 12 cm
- 23) $5x(4xy-4)$ - $\frac{1}{4}\pi r^2$
- 24) The radius of a circle of diameter 24 cm is - $(\pi+2)r$

V. Answer any 10 questions:

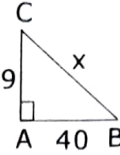
10×2=20

- 25) Compare the following pairs of rational numbers: $\frac{2}{3}, \frac{4}{5}$
- 26) Find the sum: $\frac{6}{5} + \left(\frac{-14}{15}\right)$
- 27) Find the square root by prime factorisation method: 1156
- 28) A circle of radius 120m is divided into 8 equal sectors. Find the length of the arc of each of the sectors.
- 29) Find the product of $(2x+3)(2x-4)$

V8M

- 30) Divide: $(5y^3 - 25y^2 + 8y)$ by $5y$
 31) What is 25% of 30% of 400?
 32) The price of a rain coat was slashed from Rs. 1,060 to Rs. 901 by a shopkeeper in the rainy season to boost the sales. Find the rate of discount given by him.

- 33) Find the value of x in the following triangle.



- 34) Shanthy has 5 chudithar sets and 4 frocks. In how many possible ways, can she wear either a chudithar or a frock?
 35) From the measures given below, find the area of the sectors.
 length of the arc = 48m; radius = 10m
 36) Write in scientific notation:
 Earth's volume is about 1083000000000 cubic kilometers.

VI. Answer any 8 questions:

8×5=40

- 37) Arrange the following rational numbers in ascending order:

$$\frac{-5}{12}, \frac{-11}{8}, \frac{-15}{24}, \frac{-7}{-9}, \frac{12}{36}$$

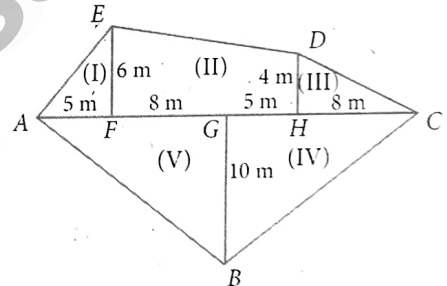
- 38) Simplify: $\left[\frac{4}{3} - \left(\frac{-3}{2} \right) \right] + \left[\frac{-5}{3} \div \frac{30}{12} \right] + \left[\frac{-12}{9} \times \frac{-27}{16} \right]$

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

- 40) What is the square root of cube root of 46656?

- 41) The radius of a sector is 21 cm and its central angle is 120° . Find (i) the length of the arc (ii) area of the sector (iii) perimeter of sector. ($\pi = \frac{22}{7}$)

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



- 43) Multiply $3x^2y$ and $(2x^3y^3 - 5x^2y + 9xy)$

- 44) Divide: $5xy^2 - 18x^2y^3 + 6xy$ by $6xy$

- 45) Akila scored 80% of marks in an examination. If her score was 576 marks then find the maximum marks of the examination.

- 46) Ranjith bought a washing machine for Rs. 16,150 and paid Rs. 1,350 for its transportation. Then he sold it for Rs. 19,250. Find his gain or loss percentage.

- 47) Find the values of x and y in the following figure.



- 48) 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 any 2 questions:

2×8=16

- 49) Construct a quadrilateral MATH with $MA = 4$ cm, $AT = 3.6$ cm, $TH = 4.5$ cm, $MH = 5$ cm and $\angle A = 85^\circ$. Also find its area.

(OR)

Construct a trapezium AIMS in which \overline{AI} is parallel to \overline{SM} , $AI = 6$ cm, $IM = 5$ cm, $AM = 9$ cm and $MS = 6.5$ cm. Also find its area.

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

$A(5, 2)$, $B(-7, -3)$, $C(-2, 4)$, $D(-1, -1)$, $E(0, -5)$, $F(2, 0)$, $G(7, -4)$, $H(-4, 0)$.

(OR)

Draw straight lines by joining the points $A(2, 5)$, $B(-5, -2)$ and $M(-5, 4)$, $N(1, -2)$ also find the point of intersection.

Kindly send me your study materials to padasalai.net@gmail.com