

## THIRD MID TERM TEST - 2023

### Standard - IX

Time : 1.30 hrs

MATHS

Marks: 50

I. Multiple choice questions:-

7×1=7

- 1) If the sides of a triangle are 3cm, 4cm and 5cm then the area is  
a)  $3\text{cm}^2$                       b)  $6\text{cm}^2$                       c)  $9\text{cm}^2$                       d)  $12\text{cm}^2$
- 2) The lateral surface area of a cube of side 12cm is  
a)  $144\text{cm}^2$                       b)  $196\text{cm}^2$                       c)  $576\text{cm}^2$                       d)  $664\text{cm}^2$
- 3) The capacity of a watertank of dimensions  $10\text{m} \times 5\text{m} \times 1.5\text{m}$  is  
a) 75 litres                      b) 750 litres                      c) 7500 litres                      d) 75000 litres
- 4) A particular observation which occurs maximum number of times in a given data is called its  
a) frequency                      b) range                      c) mode                      d) median
- 5) For which set of numbers do the mean, median and mode all have the same values?  
a) 2, 2, 2, 4                      b) 1, 3, 3, 3, 5                      c) 1, 1, 2, 5, 6                      d) 1, 1, 2, 1, 5
- 6) If the mean of five observations  $x, x+2, x+4, x+6, x+8$  is 11 then the mean of first three observations is  
a) 9                      b) 11                      c) 13                      d) 15
- 7) The mean of the square of first 11 natural numbers is  
a) 26                      b) 46                      c) 48                      d) 52

II. Answer any five questions. question number 14 is compulsory: 5×2=10

- 8) Using Heron's formula find the area of a triangle whose sides are 10cm, 24cm, 26cm.
- 9) Find the TSA of a cuboid whose length, breadth and height are 7.5m, 3m and 5m respectively.
- 10) If the total surface area of a cube is  $2400\text{cm}^2$  then find its lateral surface area.
- 11) Find the volume of a cuboid whose dimensions are length=60m, breadth=25m height = 1.5m
- 12) In a week, temperature of a certain place is measured during winter are as follows  $26^\circ\text{C}, 24^\circ\text{C}, 28^\circ\text{C}, 31^\circ\text{C}, 30^\circ\text{C}, 26^\circ\text{C}, 24^\circ\text{C}$  Find the mean temperature of the week.
- 13) For the following ungrouped data 10, 17, 16, 21, 13, 18, 12, 10, 19, 22 find the median.
- 14) Find the mode of the given data 3.1, 3.2, 3.3, 2.1, 1.3, 3.3, 3.1

(2)

## IX MATHS

III. Answer any five questions. Questions number 21 is compulsory:-  $5 \times 5 = 25$

- 15) A farmer has a field in the shape of a rhombus. The perimeter of the field is 400m and one of its diagonal is 120m. He wants to divide the field into two equal parts to grow two different types of vegetables. Find the area of the field.
- 16) A cubical container of side 6.5m is to be painted on the entire outer surface. Find the area to be painted and the total cost of painting it at the rate of Rs.24 per  $m^2$ .
- 17) The dimensions of a brick are  $24cm \times 12cm \times 8cm$ . How many such bricks will be required to build a wall of 20m length, 48cm breadth and 6m height?
- 18) Calculate the mean of the following distribution using assumed mean method.

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	5	7	15	28	8

- 19) The following are the marks scored by the students in the summative Assessment exam.

Class	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	2	7	15	10	11	5

- 20) Find the mode of the following data

Marks	0-10	10-20	20-30	30-40	40-50
No. of students	22	38	46	34	20

- 21) Find the Arithmetic mean of the following data using Step Deviation method.

Age	15-19	20-24	25-29	30-34	35-39	40-44
No. of persons	4	20	38	24	10	9

IV. Answer any one questions:-

$1 \times 8 = 8$

- 22) Find the mean, median, mode of the following distribution.

Weight (in kgs)	25-34	35-44	45-54	55-64	65-74	75-84
No. of students	4	8	10	14	8	6

[or]

Two identical cubes of side 7cm are joined end to end. Find the Total and Lateral surface area of the new resulting cuboid.

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