

Instructions :- Read the question paper carefully. Write neatly and legibly with correct question numbers. Do not over write. Check the answers before submitting the answer sheet.

SECTION - A (20 MARKS) (Attempt all questions)

Q.I Choose the correct option.

1. The mean proportional between 5 and 45 is [10]

- (a) 10
- (b) 12
- (c) 15
- (d) 20

2. S.I. = ?

- (a) $\frac{p \times R \times T}{200}$
- (b) $\frac{P \times R \times T}{100}$
- (c) $\frac{P \times R}{100}$
- (d) $\frac{R \times T}{200}$

3. To convert a speed of km/hr into m/sec, we multiply it by

- (a) $\frac{8}{15}$
- (b) $\frac{18}{5}$
- (c) $\frac{5}{18}$
- (d) $\frac{15}{8}$

4. The degree of the polynomial $x^3 - 3x^2 + 5x - 2$ is

- (a) 3
- (b) 5
- (c) 2
- (d) 1

5. If $5(z + 4) = 35$, then the value of z is

- (a) 5
- (b) 4
- (c) 3
- (d) 2

6. Which of the following cannot be the angles of a triangle?

- (a) 56° , 64° , 60°
- (b) 42° , 37° , 81°
- (c) 45° , 70° , 65°
- (d) 63° , 35° , 82°

7. Circumference of a circle is

- a) πr
- b) $2r$
- c) 2π
- d) $2\pi r$

8. The median of the first 49 natural numbers is

- a) 24
- b) 24.5
- c) 25
- d) 25.5

9. If 6 pens cost is Rs. 69, then the cost of 16 pens is

- (a) Rs. 184
- (b) Rs. 481
- (c) Rs. 282
- (d) Rs. 118

10. The difference between the highest and the lowest values of observations in a data is called _____.

- (a) mean

- (b) mode
- (c) range
- (d) median

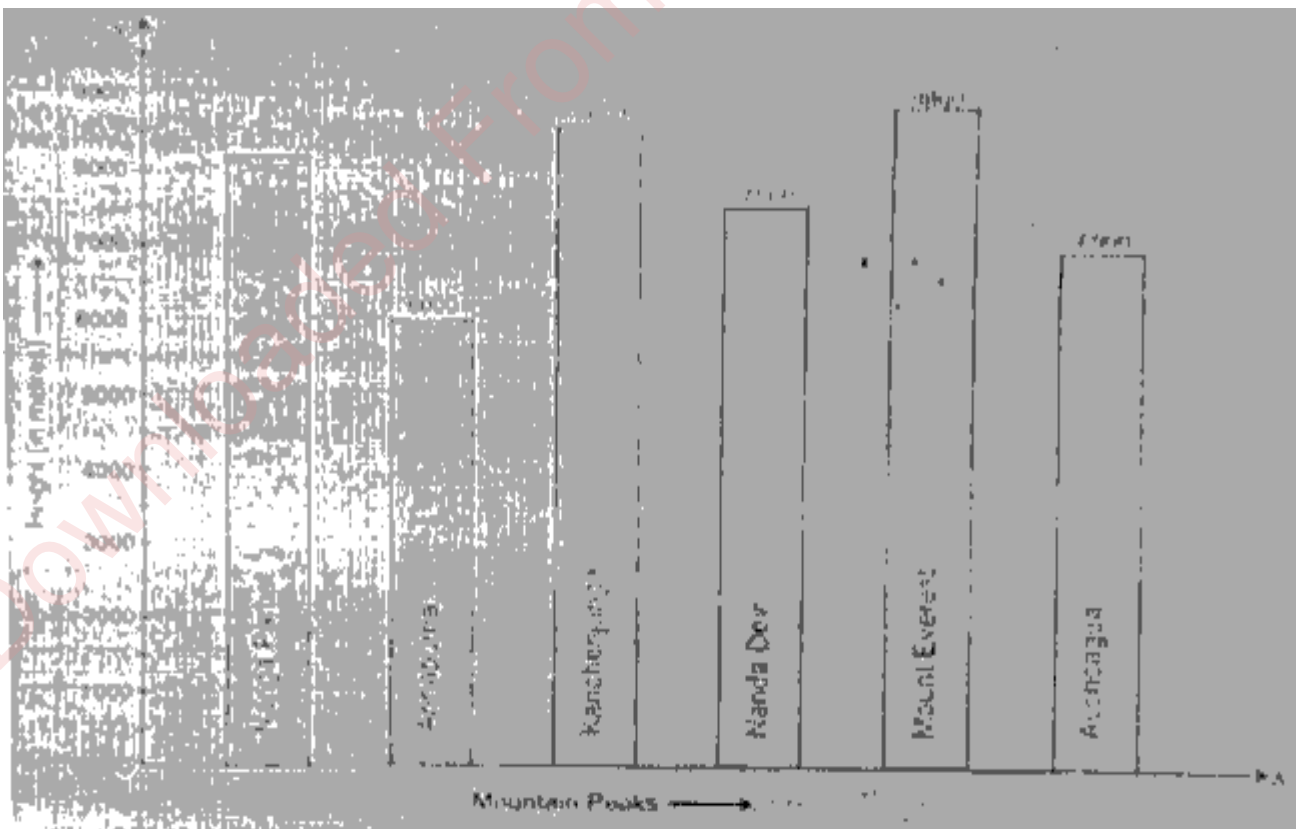
Q.II Fill in the blanks :- [5]

1. Terms having the same variables are called _____.
2. The longest side of a right angled triangle is called _____.
3. The _____ of a circle is called its circumference.
4. The value of the variable which occurs most frequently is called the _____ of the data.
5. In a proportion, the first and fourth terms are called _____.

Q.III Write True (T) or False (F):- [2]

1. The solutions of an equation in variable x are the values of x for which L.H.S. = R.H.S.
2. The co-efficient of a^2b in $9a^2bc$ is $9b$.
3. Mean of first 2 multiples of 4 is 8.
4. $1 \text{ m}^2 = 10,000 \text{ cm}^2$.

QIV Given below is a bar graph showing the heights of six mountain peaks. [3]



Read the above bar diagram and answer the following questions:

1. Which is the highest peak and what is its height?
2. What is the ratio of the heights and lowest peaks?
3. Which peak is second highest and what is its height?

SECTION-B (20 Marks) (Attempt any 4 questions)

Q.I a) In a one-day cricket match, the runs scored by the players of a team are 6, 10, 16, 20, 8, 19, 30, 57, 2, 0, 8. Find the mean score.

b) The weights of 13 students (in kg) are , 41, 52, 65, 40, 53, 34, 61, 47, 42, 44, 31, 35. Find the median weight.

Q.II a) A rectangular garden is 175 m long and 96 m broad. Find the cost of fencing it at Rs. 17.50 per metre.

b) Find the area of the triangle, having base = 16 cm and height = 7.5 cm

Q.III a) Construct a ΔABC such that $AB = 5$ cm, $BC = 4.6$ cm and $AC = 4.3$ cm.

b) The angles of a triangle are in the ratio 3: 5 : 4. Find the measure of each of the angles.

Q. IV a) In given figure, one side of a triangle has been produced. Find all the angles of the given triangle.



b) In a right angled triangle, find the length of the hypotenuse, if the other two sides measure 6 m and 8 m.

Q.V a) Simplify:- $2m - 3n + 5p + 2m + n - 2p - 3m - 4n + p$

b) Add:- $2x + 9y - 7z, 3y + z - 3x, 2z - 4y - x.$

Q.VI a) Three-sevenths of a number is 12. Find the number.

b) Find the simple interest and amount for Rs. 8400 for 4 years at 8% per annum.

Q. VII a) There are 42 boys and 18 girls in a class. What is the percentage of boys in the class?

b) Find the value of x in $42: 12 :: 7 : x$.

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