

राज्य शिक्षा केन्द्र म.प्र. भोपाल

वार्षिक परीक्षा सत्र 2023-24

विषय - गणित (अंग्रेजी माध्यम)

Time 2:30 hrs.

Class - 8

M.M. 68 ⁵⁰

Multiple Choice Questions. (Q.1 - 5)

Instructions- Choose the correct option and write. Each question carries 1 mark.

- Q.1 Additive inverse of rational number $\frac{7}{8}$ is — (1)
 (A) $-\frac{7}{8}$ (B) $\frac{8}{7}$ (C) 0 (D) 7
- Q.2 Value of x in equation $ax + b = 0$ is (1)
 (A) $\frac{b}{a}$ (B) $-b - a$ (C) $b - a$ (D) $-\frac{b}{a}$
- Q.3 Each interior angle of a polygon is 108° , its exterior angle will be — (1)
 (A) 90° (B) 72°
 (C) 108° (D) 180°
- Q.4 Square of 0.4 is— (1)
 (A) 1.6 (B) 0.8
 (C) 0.4 (D) 0.16
- Q.5 Value of $(3^2)^3$ will be. (1)
 (A) 3^6 (B) 3^5
 (C) 3^3 (D) 3^2

Fill in the blanks. (Q. 6 - 10)

Instructions- Fill in the blanks given below. Each question carries 1 mark.

- Q.6 Multiplicative inverse of rational number $\frac{37}{49}$ will be _____. (1)
- Q.7 A simple closed curve made up of only line segments is called _____. (1)
- Q.8 Probability of occurrence of a certain event is _____. (1)
- Q.9 The tax charged on the selling price of any item is _____. (1)
- Q.10 Value of $(-1)^{16}$ will be _____. (1)

Very Short Answer Type Questions. (Q. 11 - 16)

Instructions- Solve the following questions. Each question carries 2 marks.

- Q.11 Measure of one angle of a parallelogram ABCD is 45° . Find the measure of remaining three angles. (2)
- Q.12 Find the value of $8^{-1} \times \frac{5^3}{2^{-4}}$ (2)

- Q.13 Write the type of proportion shown in the following examples (2)
- (a) The time taken for a fixed journey and the speed of the vehicle.
- (b) The population of a country and the area of land per person.
- Q.14 An electric pole, 14 metres high, casts a shadow of 10 metres. Find the height of a tree that casts a shadow of 15 metres under similar conditions. (2)
- Q.15 Find the value of 7^3 by using the formula $(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$ ~~(2)~~
- Q.16 Find the cube root of 216 by using Viloknam. ~~(2)~~

Short Answer Type Questions. (Q. 17 - 22)

Instructions- Solve the following questions. Each question carries 3 marks.

- Q.17 Multiply: (3)

$$\frac{-7}{3} \times \left(\frac{5}{4} \times \frac{2}{9} \right)$$

- Q.18 Solve the following equation and find the value of x (3)

$$\frac{5x}{2} = 2x + 18$$

- Q.19 Draw the bar graph for the following information. (3)

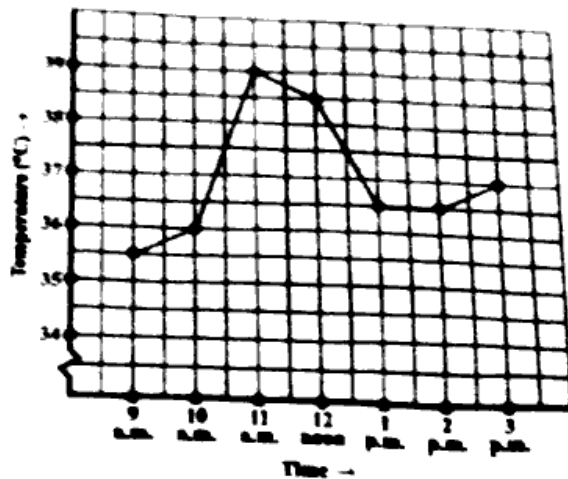
Month	July	August	September
Number of watches sold	100	150	200

- Q.20 If two numbers of Pythagorean triplet are 6 and 8, then find the third number. (3)
- Q.21 If measurement of one side of a cube is 9 centimetre, then what will be the volume of that cube? <https://www.mpboardonline.com> (3)
- Q.22 If Rohan has ₹800 after spending 50% of his money, then find how much money he had initially? (3)

Long Answer Type Questions. (Q. 23 - 26)

Instructions- Solve the following questions. Each question carries 5 marks.

- Q.23 Subtract $3a(a+b+c) - 2b(a-b+c)$ from $4c(-a+b+c)$. (5)
- Q.24 There are 18 cylindrical pillars in a building. The radius of each pillar is 35 centimetres and height is 5 metres. Find the cost of painting all the pillars at the rate of ₹9 per square metre. (5)
- Q.25 Divide $44(x^4 - 5x^3 - 24x^2)$ from $11x(x-8)$ (5)



The above graph shows the temperature of a patient in a hospital, recorded each hour. observe the graph and answer the following questions-

- When was the patient's temperature 36°C ?
- What was the patient's temperature at 12 noon ?
- How many times patients's temperature was the same during entire interval ?
- What is the difference between the maximum and minimum temperature of the patient in this entire interval ?
- In what intervals does the patients temperature show a decreasing trend ?

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