

JHARKHAND ACADEMIC COUNCIL, RANCHI
MODEL QUESTION PAPER

Subject : MATHEMATICS

Time : 2 Hours

Class : 8 (VIII)

Marks : 80

I. Choose the correct alternative from the *four* alternatives : 15 × 1 = 15

1. The smallest natural number is
 - (a) + 1
 - (b) - 1
 - (c) 0
 - (d) 10.
2. The correct product of $(-5) \times (-1)$ will be
 - (a) - 5
 - (b) + 5
 - (c) - 1
 - (d) 0.
3. $2xy + 3$ is algebraic expression.
 - (a) monomial
 - (b) binomial
 - (c) trinomial
 - (d) none of these.
4. The correct value of $(2a)^0$ is
 - (a) 2
 - (b) $2a$
 - (c) 0
 - (d) 1.
5. The triangle whose all the three interior angles are equal, will be
 - (a) right angled triangle
 - (b) acute angled triangle
 - (c) scalene triangle
 - (d) equilateral triangle.
6. The maximum number of acute angles in a right angled triangle can be
 - (a) 3 acute angles
 - (b) 2 acute angles
 - (c) 1 acute angle
 - (d) all three are correct.
7. The correct value of 5^3 is
 - (a) 15
 - (b) 125
 - (c) 243
 - (d) none of these.
8. The cube root of 64 is
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4.

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MATH

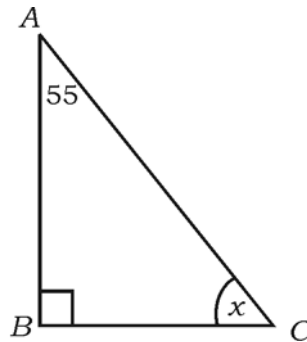
9. The tally marks |||| shows
- (a) 2 (b) 3
(c) 5 (d) 7.
10. If r and h are the radius and height of a cylinder then the curved surface area of the cylinder will be
- (a) $\pi r^2 h$ (b) $2\pi r h$
(c) $2\pi r^2$ (d) $\pi r h$.
11. The correct value of $a^m \div b^m$, where $m = 0$ will be
- (a) 0 (b) 1
(c) 2 (d) all three are wrong.
12. The example of conical shape is
- (a) brick (b) one page of a book
(c) the cap of a joker (d) mobile phone.
13. If the number of vertices, number of surfaces and the number of edges are V, F and E respectively, then the correct formula of Euler will be
- (a) $F + V - E = 2$ (b) $F - E - V = 2$
(c) $F + E + V = 2$ (d) all three are wrong.
14. 40% of 40 will be
- (a) 80 (b) 160
(c) 1600 (d) 16.
15. The quadrilateral whose only one pair of opposite sides are parallel, will be
- (a) rhombus (b) parallelogram
(c) trapezium (d) rectangle.

II. Fill in the blanks with suitable words / figures as the answer be correct :

$$15 \times 1 = 15$$

- The sum of the three interior angles will be degree.
- The four sides of a square are
- The sum of all the interior angles of a pentagon is degree.
- Supplementary angle of 70° is
- If $x = 3$ then the value of x^3 is
- The correct value of $3^\circ + 4^\circ + 5^\circ$ is

7. The value of a in $a - 2 = 8$ is
8. The tally mark of the number 14 will be
9. The information collected in terms of numbers is
10. The class mark of the class interval $26 - 30$ is
11. If the length, breadth and height of a cuboid are l , b and h respectively then the formula of the volume of the cuboid will be
12. The circumference of a circle of radius 7 cm is cm.
13. One rational number between $\frac{1}{2}$ and $\frac{1}{4}$ is
14. The correct product of $(m + n)(m - n)$ is
15. In the following figure where ABC is a right angled triangle, the value of x will be



III. Match the following in correct pair :

$10 \times 1 = 10$

Part - A

Part - B

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|--|---|
| 1. A triangle (Δ) of which one angle is right angle | a) negative number |
| 2. 14 | b) 289 |
| 3. The lengths of all four sides are equal | c) area of rectangle |
| 4. Smallest integer | d) II III IIII |
| 5. $2x + 2 = 22$ | e) square |
| 6. - 127 | f) commutative law |
| 7. $x + y = y + x$ | g) simple interest |
| 8. Length \times breadth | h) right angled triangle |
| 9. $(17)^2$ | i) 0 |
| 10. $\frac{\text{Principal} \times \text{time} \times \text{rate}}{100}$ | j) $x = 10$ |

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- IV. Each question is of 3 marks : 5 × 3 = 15
1. Find three rational numbers between $\frac{1}{4}$ and $\frac{1}{8}$.
 2. Find the square root of 4489 by division method.
 3. Multiply $(x + 2y)(x + 2y)$.
 4. Find the factors of $x^2 + 6x + 5$.
 5. Write 705200000 in standard form.
- V. Rita takes a loan of Rs. 10,000 at 5% interest. If the amount is to be paid off after 2 years then how much will Rita have to pay as compound interest ? 5
- VI. If the length of each edge of a cube is 6 cm then find the total surface area. 5
- VII. Following are the marks scored in Mathematics by the students of Class VIII of a school. 5
- 37, 55, 71, 13, 29, 24, 58, 91, 87, 63
24, 43, 53, 78, 56, 21, 17, 15, 28, 52
33, 49, 11, 07, 29, 15, 32, 55, 40, 47
59, 51, 67, 73, 88, 43, 21, 87, 93, 14
- Prepare a frequency distribution table with the above data whose class intervals are 0 – 10, 10 – 20, etc.
- VIII. Construct a rectangle $ABCD$ in which $AB = 5$ cm and $CD = 7.6$ cm. 10
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