

Sylhet Cadet College
2nd Term-End Examination - 2024
Class: VII
Subject: Mathematics

Time: 25 minutes

Full Marks: 30

[N.B-Answer all the questions. Each question is worth 01 (one) mark.]

Cadet No. _____ Name: _____ Form: _____ Sign of Invigilator: _____

Short Questions

1. If a piece of paper is folded 10 times, how many layers are created? _____
2. What is the value of $\frac{2^5}{4^2}$ _____
3. What is GCD of $\frac{1}{2}$ and $\frac{1}{4}$? _____
4. What is Unit Ratio? _____
5. In a polygon, what is the relationship between the no. of vertices and the no. of sides? _____
6. Which ratio gives us the value of Pi (π)? _____
7. If $4x + 6 = 18$, $x = ?$ _____
8. If $\frac{a}{c} = \frac{d}{b}$, $b = ?$ _____
9. What is the LCM of $\frac{1}{2}$ and $\frac{1}{6}$ _____
10. The ratio of two numbers is 2:3. If the first number is 20, what is the other number? _____
11. Where do you have to put your finger to hold a disk on it? _____
12. $x - 42 = 915$; $x = ?$ _____
13. Write ten thousand in exponent form. _____
14. Write 3 multiples of 0.3, excluding itself. _____
15. Write 2 common factors of $\frac{1}{2}$ and $\frac{1}{4}s$ _____
16. A:B = 5:6 and B:C = 8:12. What is A:B:C? _____
17. Two numbers are 10 and 35. Express them as a ratio. _____
18. The area of a circle is 28.26. What is its radius? [assume $\pi = 3.14$] _____
19. Name the type of the equation: $ax^2 + bx + c$ _____
20. $d \div 20 = 20$. What is the value of d? _____
21. $(2^{-2})^2 = ?$ _____
22. If $8^{27} \times 8^x = 8^{30}$, what is the value of x? _____
23. Write 10 Crore in exponent form. _____
24. Price of 4 apples is equal to that of 2 apples and 1 orange. If price of an apple is 5 taka, what is the price of an orange? _____
25. A pattern is: $X_n = 3 \times 2^{n-1}$; where X_n is the nth value. what is 5th number? _____
26. What is the value if 2 is divided by 0.5? _____
27. Write down 3 multiples of $\frac{1}{6}$ _____
28. $\frac{1}{3}, \frac{1}{4}, \frac{2}{4}, \frac{4}{9} \rightarrow$ Which is the greatest? _____
29. 0.25, 0.125, 0.30, 0.55 \rightarrow Which one is a factor of 0.5? _____
30. The radius of a circle is 1 m. What is its circumference? _____

Sylhet Cadet College
2nd Term-End Examination - 2024
Class: VII
Subject: Mathematics

Time: 2 hours and 15 minutes

Full Marks: 70

Answer ANY SEVEN (07) Questions

1. Everyday, an employee is paid double the previous day, and the amount equal to that of the previous day is deducted.
 - (a) Express the scenario with a formula. 5
 - (b) What is the total payment that he gets after 5 working days? 5
2. Determine GCD and LCM.
 - (a) 0.2 and 0.3 5
 - (b) $\frac{1}{2}$ and $\frac{1}{5}$ 5
3. The height of a triangle is 2 cm less than thrice its base. If the area of the triangle is 20cm^2 , what is its height? If the triangle is known to be irregular, will this statement hold? 10
4. The ratio of the times taken by three factories to produce a certain amount of products is 2:4:5. If the time taken by the first factory is 200 minutes, how much time is required by the other factories? 10
5. Rumi goes to buy pizza from a local shop. He finds there two types of pizzas, both having same height and quality.
 - (a) Type A: Radius is 30 cm and price 200 taka
 - (b) Type B: Circumference is 125 cm and price 100 takaFind the price per square cm and, based on this, decide which one to buy. 10
[Use $\pi = 3.14$]
6. Solve the problems using simple linear equations.
 - (a) The summation of two numbers is 20. If their product is 96, what are the numbers? 5
 - (b) If the radius of circle increases by 20%, find the relationship between the old and new area. 5
7. The average distance between the sun and the earth is 150 billion meters, and speed of light in the vacuum is 30 crore meters per second.
 - (a) Express the numbers as exponents. 3
 - (b) How much time (in second) is required for the sunlight to reach Earth? 3
 - (c) Convert the time in minute and second. 4
8.
 - (a) Draw the national flag (length = 10 cm, width = 6 cm, radius = 2 cm). 5
 - (b) Find the proportion of area of the rectangle and the circle. 5