ANANDALAYA
ANNUAL EXAMINATION
Class : VI

Subject : Mathematics   M.M : 80
Date   : 12-03-2024   Time : 3 hrs.

General Instructions:
i)   This question paper has 4 Sections A, B, C and D.
ii)   Section A has 16 MCQs carrying 1 mark each.
iii)   Section B has 10 questions carrying 2 marks each.
iv)   Section C has 8 questions carrying 3 marks each.
v)   Section D has 5 questions carrying 4 marks each.
vi)   All questions are compulsory.

Section-A

1. The smallest prime number that is just greater than HCF of 6 and 8 is _____   (1)
    (A) 3   (B) 11   (C) 13   (D) 5

2. The least number that should be replaced by * so that the number 7102 * 92 is divisible by 9   (1)
    is _____
    (A) 3   (B) 9   (C) 7   (D) 6

3. 5 km below sea level can be written as _____   (1)
    (A) -5 km   (B) +5 km   (C) 625 km   (D) -625 km

4. $(-999) - (-99) =$ ____   (1)
    (A) 900   (B) -900 (C) 0   (D) -1098

5. The correct number in the ☐ , if $\frac{45}{60}$ is equivalent to $\frac{3}{\Box}$ is _____   (1)
    (A) 5   (B) 4   (C) 2   (D) 6

6. If $\Box - \frac{5}{8} = \frac{1}{4}$, then $\Box =$ _____   (1)
    (A) $\frac{6}{8}$ (B) $\frac{7}{8}$ (C) $\frac{1}{2}$ (D) $\frac{4}{16}$

7. The adjoining table represents information regarding the game liked by Class VI children.   (1)

   The difference between the students who like football and hockey is _____

Name of the Game	Number of students
Cricket	district 𝗟𝗛𝗜 𝗟𝗛𝗜 𝗟𝗛𝗜 𝗟𝗛𝗜 II
Football	𝗟𝗛𝗜 𝗟𝗛𝗜 𝗟𝗛𝗜 III
Hockey	𝗟𝗛𝗜 𝗟𝗛𝗜 IIII
Basket Ball	𝗟𝗛𝗜

    (A) 4   (B) 5
    (C) 3   (D) 2

8. In a pictograph, if $1 \Delta = 5$ flowers, then the number of symbols (Δ) required to show   (1)
    100 flowers is _____.
    (A) 50   (B) 20   (C) 10   (D) 25

9. The expression for the statement '15 subtracted from m is' _____.   (1)
    (A) 15 – m   (B) m – 15   (C) 15m   (D) $\frac{15}{m}$

10. If side of a regular hexagon is denoted by '*l*', then perimeter of the hexagon using '*l*' is ___. (1)
   (A) $6 + l$ (B) $l - 6$ (C) $6\,l$ (D) $\dfrac{l}{6}$

11. The angle formed by two hands of the clock at 3 o'clock is ____. (1)
   (A) $90°$ (B) $180°$ (C) $30°$ (D) $40°$

12. The perimeter of an isosceles triangle is 19 *cm*. One of the two equal sides is 7 *cm*, the third side equals to _____. (1)
   (A) 7 *cm*   (B) 6 *cm*   (C) 8 *cm*   (D) 5 *cm*

13. Look at the adjoining figure. (1)
ΔABC *is* _____.
(A) Scalene
(B) Isosceles
(C) Equilateral Triangle
(D) Right angled Triangle
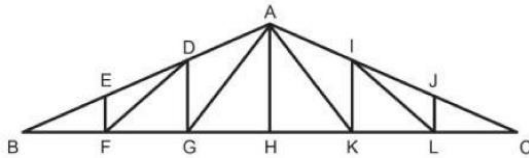
14. Anu wants to fence the garden in front of her house, on three sides with lengths 20 *m*, 12 *m* and 12 *m*. The length of wire required will be _____. (1)

   (A) 128 *m*   (B) 44 *m*
   (C) 2880 *m*   (D) 64 *m*

15. If a, b, c and d are in proportion, then _____ (1)
   (A) $a \times b = c \times d$ (B) $a \times d = b \times c$ (C) $a \times c = b \times d$ (D) None of these

16. Ratio equivalent to 2 : 3 is _____ (1)
   (A) 4 : 3   (B) 4 : 5   (C) 6 : 9   (D) 10 : 9

Section-B

17. Sarang has '*a*' toffees. His brother Mrunal has 6 toffees less than Sarang. His sister Selvi has twice the toffees Sarang has. (2)
(a) How many toffees does Mrunal have?
(b) How many toffees does Selvi have?

18. Are 16 and 20 co-primes? Justify your answer. (2)

19. Write the general formula for the pattern of matchsticks shown below and hence write the matchsticks required for 8 such patterns. (2)

20. Determine if the following ratios form a proportion: (2)
250 *ml* : 2 *l* :: 48 minutes : 120 minutes

21. (a) Reduce $\dfrac{63}{72}$ to the lowest form. (2)

(b) Express $\dfrac{32}{12}$ as mixed fraction

22. (a) Where will the minute hand of a clock stop if it starts at 7 and makes $\frac{3}{4}$ of revolution, clockwise?   (2)

(b) What fraction of a revolution does the hour hand of a clock turn through, when it moves from 5 to 8?

(c) Mudra was driving her car towards north. Which direction will she face if she turns through a right angle in clockwise direction?

(d) Write the number of right angles you turn through if you stand facing west and make $\frac{1}{4}$ revolution anti-clockwise?

23. (a) Write the successor and predecessor of –21.   (2)

(b) Represent (–2) + 7 on the number line.

(c) Write the smallest and the greatest integers from the set of numbers given below :
– 8, 5, –11, 13

(d) Write two integers greater than – 4.

24. Read the graph and answer the following questions: (2)
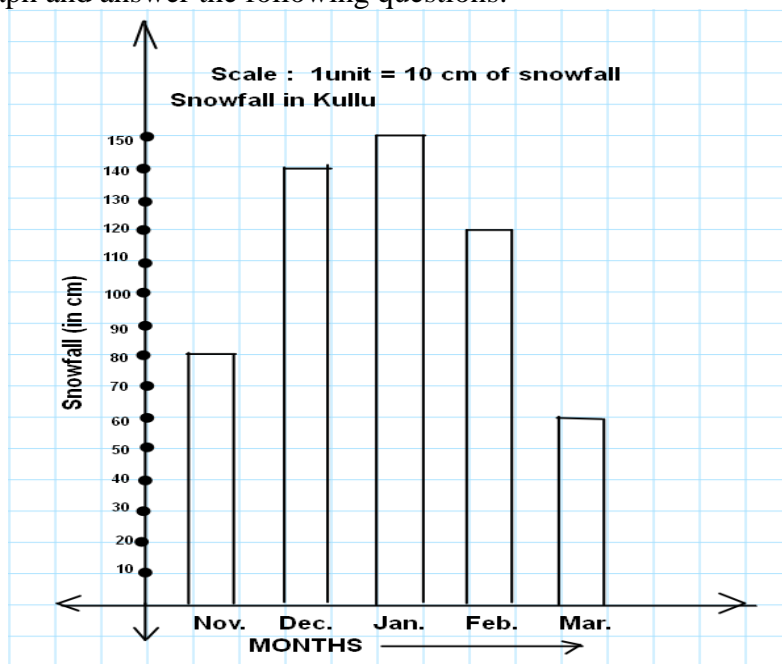
(a) How many more centimetres of snowfall is there in January than in December?

(b) How many centimetres of snowfall is there in the month of March?

(c) Which is the coldest month?

(d) Arrange the months in descending order of snowfall (in *cm*).

25. Find the number of square tiles each of side 20 *cm* that are required to cover the floor of a room measuring 3 *m* by 2 *m*.   (2)

26. Solve and compare using '>', '<' or '=':   (–12) + (–3) ☐ (– 12) + 5   (2)

Section-C

27. Using divisibility rules write if :   (3)
(a) 872361 is divisible by 11.   (b) 65538 is divisible by 6.

28. Name the quadrilateral(s) with given conditions: (3)
(a) Two quadrilaterals whose all sides are equal.
(b) A quadrilateral whose only one pair of opposite sides is parallel.
(c) Two quadrilaterals whose both pairs of opposite sides are parallel.

29. (a) Saumya has '12 *t'* flowers. Ria has 6 flowers more than Saumya. How many flowers does Ria have? (3)

(b) The price of potatoes is ₹ *x* per kg and price of 1 kg onion is ₹10 less than the price of 1 kg of potatoes. Find the price of 1 kg of onion.

(c) Ragini is making a dot rangoli. There are 15 dots in one row. How many dots will her rangoli have if it has 'r' rows?

30. Rahil bought $2\frac{1}{4}$ *m* of iron wire and Rahim bought $3\frac{1}{3}$ *m* of iron wire. (3)

(a) How much wire did they buy altogether?

(b) How much more wire did Rahim buy than Rahil?

31. Find the largest and the smallest fraction: $\frac{3}{5}$, $\frac{2}{3}$, $\frac{5}{6}$, $\frac{7}{10}$ (3)

32. Perimeter of a square and rectangle is same. If the side of a square is 15 *cm* and length of a rectangle is 18 *cm*, find the area of a rectangle. (3)

33. There are 35 girls and 45 boys in a class. Find the ratio of: (3)

(a) Total number of students to the number of boys.

(b) Number of boys to the number of girls.

(c) Number of girls to the total number of students.

34. The lengths of 20 carrots (in centimeters) are given in the table given below: (3)

| 15	22	21	20	22	15	20	18	20	15
20	21	20	22	21	18	21	18	20	18

Arrange the above data in a table using tally marks and answer the following questions:

(a) Find the number of carrots which have length more than 20 cm?

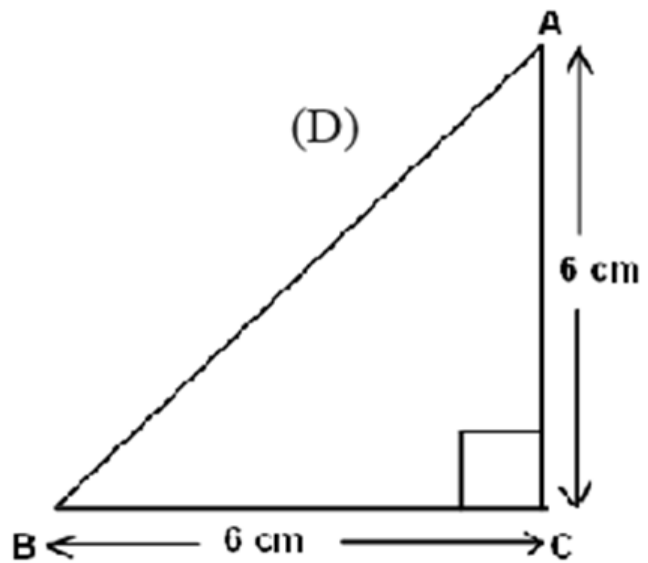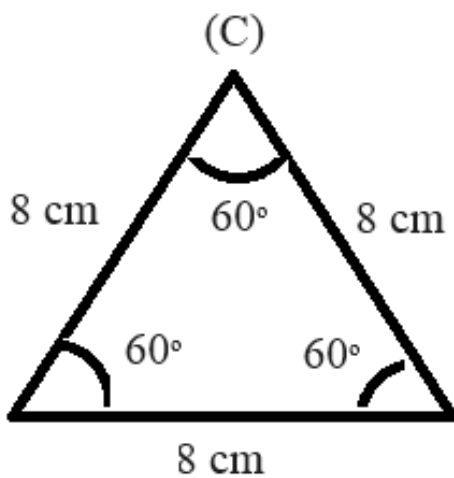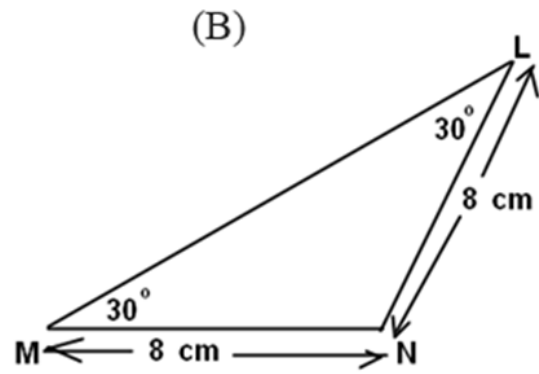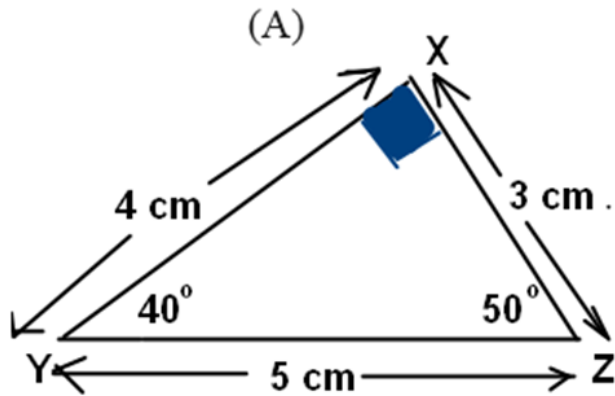(b) Write the length of the carrot which occurs maximum number of times?

Section-D

35. The neon signboard of a jewellery shop has three colours; the logo of the shop in red, the name of the shop in green and the picture of some jewellery in yellow. The logo comes on every 20 seconds, the name every 24 seconds and the picture of the jewellery shines every 12 seconds. All these three lights were switched on together. After how much time will all these three light up together again? (4)

36. By splitting the figure into rectangles, find its total area. (Figure is not to the scale) (4)
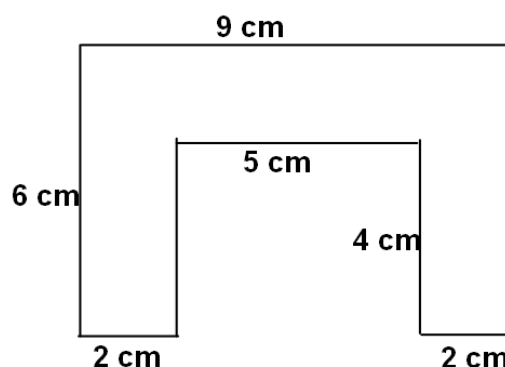
37. Write two appropriate attributes for each of the triangle shown in the figure given below. (4)
    (Attributes: Acute angled, Right angled, Obtuse angled, Scalene, Isosceles, Equilateral)

(A)

4 cm   X   3 cm .

40°   50°

Y ← 5 cm → Z

(B)

L

30°

8 cm

30°

M ← 8 cm → N

(C)

8 cm   60°   8 cm

60°   60°

8 cm

(D)

A

6 cm

B ← 6 cm → C

38. (a) Harpal deposited ₹ 7594 in her account. On Monday, she withdrew ₹ 6095. Next day she (4)
    again deposited ₹ 9000. What is the balance in her account?
    (b) One night, the temperature of Leh was -8 ℃ and the next day it went up to - 6 ℃. Find the
    difference between the lowest and the highest temperature.

39 The ratio of blue and black pens in a stationery shop is 2 : 3. If there are 60 pens in all, find: (4)
    (a) Number of black pens.
    (b) Number of blue pens
    (c) Ratio of blue pens to the total number of pens.
    (d) Ratio of total pens to the number of black pens.