Student ID | | | | | | | | | | | |

Directorate of Education, GNCT of Delhi

Practice Paper (Annual-Term)

Session: 2025-26

Class – VI

Subject-Mathematics

Duration: $2\frac{1}{2}$ hours **Max. Marks: 60**

GENERAL INSTRUCTIONS:

Read the following instructions carefully and follow them:

1. This question paper has 16 questions. All questions are compulsory.
2. Question paper is divided into **FIVE** sections-Section A, B, C, D and E.
3. In section A-question number 1 has multiple choice questions (MCQs) of 1 mark each.
4. In section B-question number 2 to 7 are objective type questions of 02 marks each.
5. In section C-question number 8 to 10 are short answer (SA) type questions carrying 03 marks each.
6. In section D-question number 11 to 13 are long answer (LA) type questions carrying 05 marks each.
7. In section E-question number 14 to 16 are source based/case study questions carrying 04 marks each.
8. There is no overall choice. However, an internal choice has been provided in 1 question in Section B, 1 question in Section C, 2 questions in Section D and in each 2 marks questions in Section E.
9. Draw neat figures wherever required. Take $\pi = \frac{22}{7}$ wherever required if not stated.
10. Use of calculator is NOT allowed.
11. **Please write down the serial number of questions before attempting it.**

SECTION-A

Question 1 consists of Multiple-Choice Questions (i-xii) of 1 mark each. Choose the appropriate option from the given options. **$(12 \times 1 = 12)$**

1 (i) The next term of the sequence: 1, 2, 4, 8, 16,… is:

(a) 17 (b) 30

(c) 32 (d) 18

1 (ii) The number of end points in a line segment is:

(a) 0 (b) 1

(c) 2 (d) 3

1 (iii) The number whose digits add up to 14 is:

(a) 140 (b) 234

(c) 456 (d) 950

1 (iv) In the sentence, "**The quick brown fox jumps right over the little lazy dog**", the number of times letter 'e' appears is:

(a) 2 (b) 3

(c) 4 (d) 5

1 (v) The prime number which is divisible by 5 is:

(a) 35 (b) 25

(c) 5 (d) 15

1 (vi) The mixed fraction for $\frac{47}{9}$ is:

(a) $5\frac{1}{9}$ (b) $5\frac{2}{9}$

(c) $5\frac{3}{9}$ (d) $5\frac{4}{9}$

1 (vii) The area of a rectangular garden that is 50 m long is 1000 sq m. The width of the garden is:

(a) 20 m (b) 100 m

(c) 50 m (d) 10 m

1 (viii) The prime factorisation of 84 is:

(a) 2 × 2 × 3 × 7 (b) 2 × 3 × 3 × 7

(c) 2 × 2 × 7 × 7 (d) 2 × 2 × 2 × 7

1 (ix) The equivalent fraction of $\frac{1}{5}$ is:

(a) $\frac{5}{1}$ (b) $\frac{20}{60}$

(c) $\frac{12}{60}$ (d) $\frac{11}{50}$

1 (x) The distance between the centre and any point on the circle is called its:

(a) Side (b) Radius

(c) Line (d) Line-segment

1 (xi) The number of lines of symmetry in a square is:

(a) 1 (b) 2

(c) 3 (d) 4

1 (xii) Lakshmi has credits of ₹30, ₹40 and ₹50, and debits of ₹40, ₹50 and ₹60 in her savings account. The bank account balance now is:

(a) Credit ₹30 (b) Debit ₹30

(c) Credit ₹20 (d) Debit ₹20

SECTION-B

Question 2 to 7 are Objective Type Questions of 2 marks each. **(6× 2 = 12)**

2. Find the prime factorization of 196.
3. List all 3-digit palindromes made from digits 1, 2, and 4 when the repetition of digits is allowed.
4. (a) A survey was conducted to find the favourite colours of students. The results were:

Blue	Red	Blue	Blue	Red
Pink	Blue	Pink	Yellow	Green
Red	Pink	Yellow	Red	Green
Pink	Red	Pink	Green	Red

Prepare a frequency table for the above data.

OR

4. (b) A bar graph shows the number of students in each class. The bar for Class V is 10 units high, and the bar for Class VI is 13 units high. If the scale is 1-unit length = 4 students, what is the total number of students in both classes?
5. A triangle has one right angle and another angle of 40°. Find the third angle.
6. Fill in the blanks by observing the following pattern:

(i) 1 = 1

(ii) 1 + 2 + 1 = 4

(iii)1 + 2 + 3 + 2 + 1 = 9

(iv)1 + 2 + ___ + ___ + ___ + 2 + 1 = ___

7. Find the common factors of 20 and 36.

SECTION-C

Question 8 to 10 are Short Answer Type Questions of 3 marks each. **(3× 3 = 9)**

8. (a) Construct a rectangle one of whose sides is 4 cm and the diagonal is of length 8 cm.

OR

8. (b) Construct a rectangle one of whose sides is 3 cm and the diagonal is of length 7 cm.

9. Complete the following grid with suitable integers (positive or negative) to make the required border sum:

6		
		−6

Border sum is −4.

10. Write the following fractions in ascending order.

$$\frac{7}{10}, \quad \frac{12}{15}, \quad \frac{3}{5}$$

SECTION-D

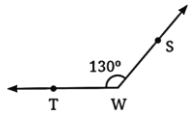
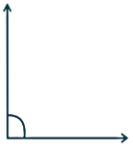
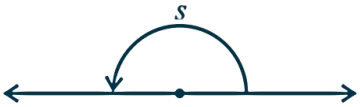
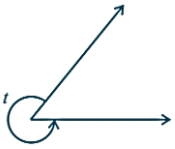
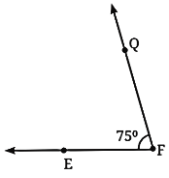
Question 11 to 13 are Long Answer Type Questions of 5 marks each. **(3× 5 = 15)**

11. (a) A floor is 13 m long and 12 m wide. A square carpet of sides 12 m is laid on the floor. Find the area of the floor that is not carpeted.

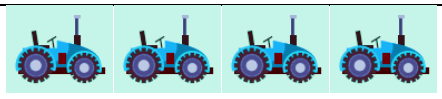
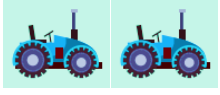
OR

11. (b) Four square flower beds each of side 4 m are in four corners on a piece of land 12 m long and 10 m wide. Find the area of the remaining part of the land.

12. In the following table, match the entries in column A with correct entries in column B.

Column A	Column B
(a) Acute angle	(i) 
(b) Obtuse angle	(ii) 
(c) Right angle	(iii) 
(d) Straight angle	(iv) 
(e) Reflex angle	(v) 

13. The following pictograph shows the number of tractors in five different villages.

Villages	**Number of Tractors**  = 10 Tractors
Rajpura	
Shahpura	
Sant Garh	
Ramgarh	
Lakhimpur	

Observe the pictograph and answer the following questions:

a. Name the village with smallest number of tractors.

b. Name the village with the greatest number of tractors.

c. Find the number of tractors in village Lakimpur.

d. How many more tractors does village Sant Garh have than village Shahpura?

e. Find the total number of tractors in Ramgarh and Lakimpur villages taken together.

SECTION-E

Question 14 to 16 are Source Based/Case Study Questions of 4 marks each. **$(3\times 4 = 12)$**

14. During a mathematics class, the teacher was explaining the concept of **perfect numbers**. She told her students that "A number for which the sum of all its factors is equal to twice the number is called a perfect number."

Based on the given information, answer the following questions:

(i) Write all the factors of number 20. 1

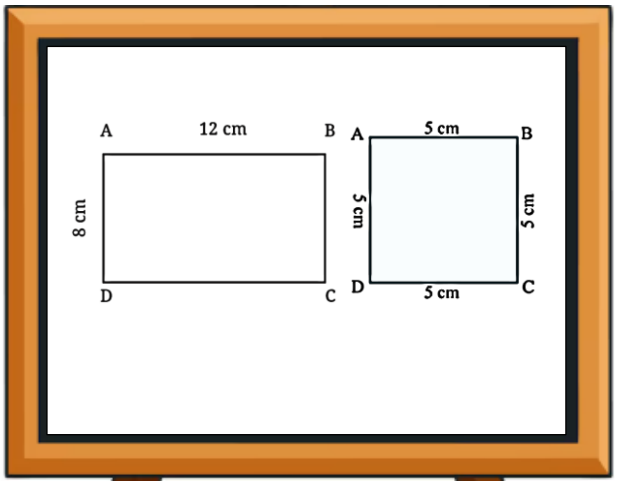
(ii) Write all the factors of number 28. 1

(iii) (a) Show that 20 is not a perfect number. 2

OR

(iii) (b) Show that 28 is a perfect number. 2

15. Ms. Kavita was conducting a Math Lab activity with Class VI students on the topic "perimeters of polygons". During the activity, she explained to the students that "The perimeter of any closed plane figure is the distance covered along its boundary when you go around it once." She drew few polygons on the board and wrote the following statement on the board:



The perimeter of a polygon = the sum of the lengths of its all sides

Based on the given information, answer the following questions:

(i) Find the perimeter of a rectangle with length ‘a’ units and breadth ‘b’ units. 1

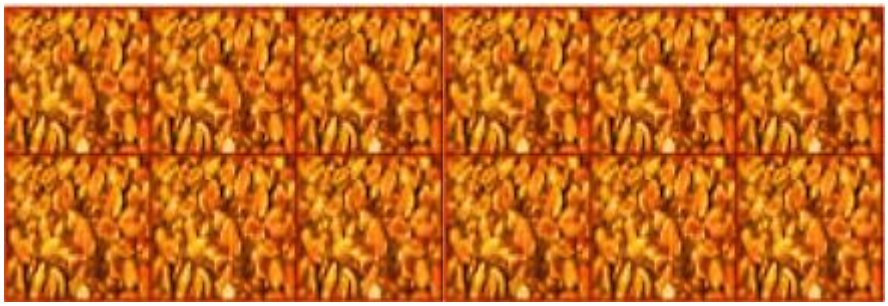
(ii) Find the perimeter of a square with length of each side as ‘x’ units. 1

(iii) (a) Calculate the perimeter of the rectangle drawn on the board. 2

OR

(iv) (b) Calculate the perimeter of the square drawn on the board. 2

16. It is a cold winter evening and Ravi, Priya and Anju are sitting with their grandmother near the warm kitchen stove. She is making jaggery chikki. She prepared a big rectangular chikki slab and cuts it into 12 equal pieces. Grandmother gives 2 pieces to Ravi, 3-3 pieces each to Priya and Anju and remaining pieces are stored in a container.



Based on the given information, answer the following questions:

(i) What fraction of the total chikki pieces does Ravi get? 1

(ii) What fraction of the total chikki pieces does Anju get? 1

(iii) (a) Find the sum of the fraction of chikki pieces received by Ravi and Priya. 2

OR

(iii) (b) Find any two equivalent fractions of the chikki pieces stored in the container. 2