

Half-Yearly Examination - (2026-27)
SUBJECT – MATHEMATICS (SET – 1)

TIME – 2½ Hours

Class- VI

M.M – 60

General Instructions: All questions are compulsory. This question paper contains 27 questions divided into Sections A, B, C, D, and E.

SECTION – A (1 x 12 = 12M)

Q1. Which of the following is a pentagonal shape sequence property?

- (A) 5 vertices (B) 4 vertices (C) 3 vertices (D) 6 vertices

Q2. The sum of 1st and 2nd triangular numbers is:

- (A) 3 (B) 4 (C) 6 (D) 10

Q3. A part of a line with two endpoints is called:

- (A) Ray (B) Line (C) Line Segment (D) Plane

Q4. A polygon with 5 sides is called a:

- (A) Triangle (B) Quadrilateral (C) Pentagon (D) Hexagon

Q5. Kaprekar constant operations are performed using:

- (A) 3-digit numbers (B) 4-digit numbers (C) 5-digit numbers (D) Prime numbers

Q6. The smallest 3-digit palindromic number is:

- (A) 101 (B) 111 (C) 100 (D) 121

Q7. Bar graphs consist of:

- (A) Circular sectors (B) Uniform width rectangular bars (C) Pictures (D) Lines only

Q8. In a pictograph, if symbol  = 5 cars, then 6 symbols represent:

- (A) 25 (B) 30 (C) 35 (D) 20

Q9. Information in the form of numerical figures is called:

- (A) Frequency (B) Data (C) Tally marks (D) Graph

Q10. The smallest composite number is:

- (A) 1 (B) 2 (C) 3 (D) 4

Q11. Assertion (A): 252 is a palindromic number.

Reason (R): Palindromic numbers remain the same when digits are reversed.

- (A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) Assertion A is true but Reason R is false.
(D) Assertion A is false but Reason R is true.

Q12. Assertion (A): An angle measuring 90° is a right angle.

Reason (R): Right angles form perpendicular lines.

- (A) Both A and R are true and R is the correct explanation of A.
- (B) Both A and R are true but R is not the correct explanation of A.
- (C) Assertion A is true but Reason R is false.
- (D) Assertion A is false but Reason R is true.

SECTION – B (2 x 7 = 14M)

Q13. Write the next four numbers in the sequence: 3, 6, 9, 12, 15, _____, _____, _____, _____

Q14. Fill in the blanks:

- (a) An angle measuring 180° is a _____ angle.
- (b) A line has _____ endpoints.

Q15. Write the smallest and greatest 4-digit numbers using digits 3, 0, 5, 8 (repetition allowed).

Q16. Find the sum of digits of 528 and 912.

Q17. [Pictograph Case] A pictograph shows book counts where  = 4 books. Class 6A has 5 symbols, Class 6B has 7 symbols. How many books do they have in total?

Q18. Check divisibility of $7\overline{3}5$ by 9.

Q19. Find all prime factors of 36.

SECTION – C (3 x 6 = 18M)

Q20. Find the HCF of 45 and 75 using prime factorization.

Q21. Explain the geometric pattern formed by square numbers and triangular numbers with an example.

Q22. [Figure / Clock Question] (i) Draw rays starting from common origin O. (ii) What is the angle between clock hands at 2 o'clock and at 9 o'clock?

Q23. The time is 23:32. What is the next palindromic time on the digital clock?

Q24. [Bar Graph Case] Interpret a bar graph showing vehicle counts (Bike: 12, Car: 20, Bus: 8, Auto: 15) and answer related questions.

Q25. Create frequency table analysis based on marks scored by 25 students.

SECTION – D (4 x 4 = 16M)

Q26. [Pictograph Construction] Construct a pictograph for sports items (Bats: 10, Balls: 25, Stumps: 15, Gloves: 20) using symbol  = 5 items.

Q27. [Figure Geometry Angles] Identify and name various adjacent and combined angles from a multi-ray vertex figure using three letters.

Q28. In a number game up to 50, say 'Tick' for multiples of 3, 'Tock' for multiples of 5, and 'Tick-Tock' for common multiples. Find counts for each and the number for 2nd 'Tick-Tock'.

Q29. [Number Puzzle / Figure] I am a 5-digit palindromic number. My thousands digit is 4, hundreds digit is 2, and units digit is odd. Find possible numbers.