No. of Printed Pages/Questions: 5 / 38

O.P. JINDAL SCHOOL, SAVITRI NAGAR

Half Yearly Exam 2025 – 26

Class/Section : VI / _____ **MM : 80**

Subject : Mathematics **Time : 3 Hrs.**

Name: _____ Roll No. _____

General Instructions: All questions are compulsory.

i) ***Section A*** consists of 16 questions and each question carry ***1 mark***.
ii) ***Section B*** consists of 8 questions and each question carry ***2 marks***.
iii) ***Section C*** consists of 8 questions and each question carry ***3 marks***.
iv) ***Section D*** consists of 4 questions and each question carry ***4 marks***.
v) ***Section E*** consists of 2 questions and each question carry ***4 marks***.

SECTION A

Multiple choice questions:

Q1. Two lines intersect

a) at a point b) at two points
c) in a line d) at an infinite number of points

Q2. An angle measuring 180° is called

a) complete angle b) reflex angle c) straight angle d) right angle

Q3. Which of the following has one end point?

a) A line b) A ray c) A line segment d) none of these

Q4. If we reverse the digit of a number 7564, then the new number formed is

a) 4657 b) 4567 c) 7564 d) 7654

Q5. When we perform the Kaprekar's operation on 5823, then how many rounds are required to reach Kaprekar's constant?

a) 5 b) 3 c) 2 d) 1

Q6. How many one digit whole numbers are there?

a) 9 b) 1 c) 10 d) none of these

Q7. If ✪✪✪✪✪ stands for 40, how much does ✪ stand for?

a) 5 b) 8 c) 40 c) none of these

Q8. A pictograph represents the data in the form of

a) picture b) horizontal bar c) vertical bar d) none of these

Q9. Which of these numbers is divisible by both 4 and 5?

a) 10 b) 20 c) 30 d) 32

Q10. Which number is a perfect number?

a) 5 b) 12 c) 28 d) none of these

Q11. Which of these is a co-prime pair?

a) 12 and 18 b) 15 and 35 c) 17 and 29 d) 25 and 30

Q12. If you add the first 5 odd numbers, what number do you get?

a) 5 b) 15 c) 30 d) 25

Q13. Which of the following is both a square number and a triangular number?

a) 9 b) 16 c) 25 d) 36

Q14. How many lines are there in the complete graph K3?

a) 1 b) 3 c) 6 d) none of these

Q15. Assertion A: The pattern 1,2,3,4,... is a sequence of counting numbers.

Reason R: In a sequence of counting numbers, each term is obtained by adding 1 on its previous term.

a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true and R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true.

Q16. **Assertion A:** The number 9 and 25 are co-prime.

Reason R: A number is said to be prime, if it has more than two factors.

a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true and R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true

SECTION B

Q17. Write true or false for each statement given below.

i) A line segment has definite length.
ii) Two intersecting lines intersect at a point.
iii) One and only one ray can be drawn with a given end point.
iv) Every point has a size.

Q18. What is the sum of the first 5 natural numbers.

Q19. Draw an angle of 85° by using protractor.

OR

Classify the angles as acute, obtuse, right angle, reflex angle or complete angle whose magnitudes are-

i) 92°
ii) 340°
iii) 30°
iv) 90°

Q20. Draw a pattern of complete graph:

a) K2
b) K4

OR

Write 6 terms of the sequence of triangular number.

Q21. Write the smallest 7-digit number having four different digits.

OR

Write four palindromic times.

Q22. If you wanted to visually represent the data of the heights of the tallest persons in each class from your school, would you use a graph with vertical bars or horizontal bars? Why ?

Q23. Write prime numbers between 20 to 40?

Q24. Find all the multiples of 40 that lie between 310 and 450.

SECTION C

Q25. Write the sequence of all 1's. Which sequence is obtained by adding the terms of all 1's up and down? Write the sequence obtained.

Q26. What is the sum of the greatest and the smallest 4-digit number formed by using the digits 3, 0, 1 and 2, when the repetition of digits is not allowed?

OR

Check if the Collatz Conjecture holds for the starting number 80.

Q27. What will be the angle at 2 o'clock? at 4 o'clock? and at 6 o'clock?

Q28. Find the common factors of 5, 15 and 25.

OR

What jump size can reach both 12 and 24? Find all the possible jump sizes.

Q29. Write any 3 palindromic dates.

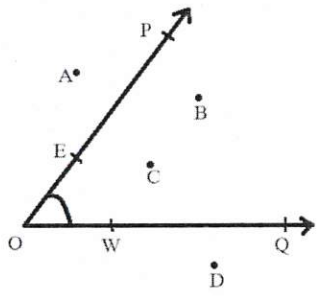
Q30. Given below is the data showing the number of children in 20 families of a colony.

2, 1, 3, 1, 2, 1, 1, 3, 2, 3, 2, 3, 2, 2, 4, 3, 1, 4, 3, 2.

Arrange the above data in ascending order and make a frequency distribution table.

Q31. In the adjoining figure, list the points which

a) Are in the interior of ∠POQ.
b) Are in the exterior of ∠POQ.
c) Lie on ∠POQ.



Q32. Sanya asked her students about the size of the shoes they wear. She noted the data on the board.

4, 5, 3, 4, 3, 4, 5, 5, 4, 5, 5, 4, 5, 6, 4, 3, 5, 6, 4, 6, 4, 5, 7, 5, 6, 4, 5

Help her to figure out the following-

a) What is the largest shoe size in the class?
b) How many students wear shoe size 5?
c) How many students wear shoe size larger than 4?

SECTION D

Q33. A survey of 120 school students was conducted to find out which activity they preferred to do in their free time:

Preferred Activity	Number of Students
Playing	15
Reading story books	10
Watching TV	20
Listening to music	30
Painting	45

Draw a bar graph for the above data taking the scale of 1 unit length = 5 students.

OR

Total number of animals in five villages are as follows:

Village A: 120 Village B: 80 Village C: 60

Village D: 100 Village E: 140

Draw a pictograph of these animals (use scale, 1Δ = 20 animals).

Q34. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20.

i) Write all even prime numbers.
ii) Write all prime numbers.
iii) Write all composite numbers.
iv) Write all the multiples of 3.

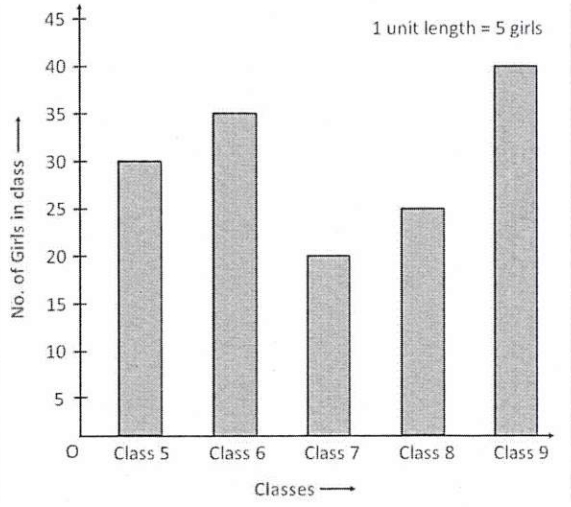
Q35. Write the sequence of the counting numbers. Which sequence do you get when you start to add the counting numbers up?

Q36. Perform Kaprekar's operation on the number 2019.

SECTION E

Case Study based questions.

(A) In a school, number of girls enrolled in different classes are shown by the help of bar graph. Refer to the bar graph and answer the following:



Q37. Which class has maximum number of girls child?

a) Class 5 b) Class 6 c) Class 7 d) Class 9

Q38. Which class has minimum number of girls child?

a) Class 9 b) Class 7 c) Class 6 d) Class 8

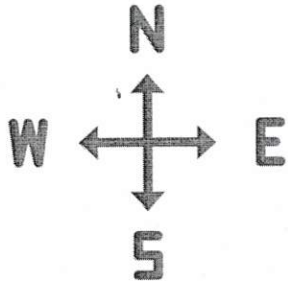
Q39. What is the total number of girls enrolled in all the classes?

a) 40 b) 20 c) 150 d) none of these

Q40. What is the difference of number of girls in class 9 and number of girls in class 5?

a) 5 b) 10 c) 15 d) 20

(B) A signboard shows arrow pointing North, East, South and West.



Q41. What angle is formed between North and East?

a) 30° b) 60° c) 90° d) none of these

Q42. What angle is formed between East and West?

a) 45° b) 90° c) 135° d) 180°

Q43. What angle is formed between North and South-East?

a) 90° b) 120° c) 180° d) 135°

Q44. If a pointer rotates from East to South, by how many degrees did it turn? Name the type of angle.

a) acute angle b) right angle c) obtuse angle d) complete angle

****