B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

TERM-1 EXAMINATION (2025-26)
MATHEMATICS

Class: VI | **Time: 3 hrs.**
Date: 05.09.25 | **Max Marks: 80**
Admission no: | **Roll no:**

General Instructions:

- This question paper consists of FIVE sections
- All answers must be correctly numbered as in the question paper and written in the answer sheet.
- Write neatly and draw diagrams wherever necessary.

Section A

Choose the correct answer **1 x 20 = 20**

1. What type of numbers does the sequence 2, 4, 6, 8,..… represent?
   (a) Even numbers (b) Odd numbers
   (c) Prime numbers (d) Square numbers

2. Which number sequence is formed by adding consecutive odd numbers?
   (a) Triangular numbers (b) Square numbers
   (c) Cube numbers (d) Powers of 2

3. What is the 5th term of the cube numbers sequence?
   (a) 125 (b) 64 (c) 36 (d) 100

4. In a pictograph, one symbol can represent _____units.
   (a) Multiple (b) only one (c) only two (d) zero

5. Which of the following is a prime number?
   (a) 49 (b) 51 (c) 53 (d) 55

6. What is the first common multiple of 3 and 5?
   (a) 10 (b) 12 (c) 15 (d) 20

7. The numbers which are not multiples of 2 are known as _____.
   (a) odd (b) even (c) prime (d) composite

8. Every number has a _____ number of factors
   (a) only 2 (b) only 4 (c) infinite (d) finite or limited

9. An angle of exactly 90° is called a _____ angle.
   (a) right (b) straight (c) obtuse (d) acute

10. An angle bisector divides an angle into _____ equal parts.
    (a) 2 (b) 4 (c) 0 (d) many

11. A ray starts at one point and extends _____in one direction.
(a) same (b) opposite (c) all (d) many

12. Which of the following is a 3-digit palindrome that can be formed using the digits 1, 2, and 3?
(a) 111 (b) 122 (c) 123 (d) 132

13. Which of the following numbers has digits that add up to 14?
(a) 85 (b) 67 (c) 59 (d) 92

14. What is the estimated difference of 812 – 493?
(a) 200 (b) 250 (c) 300 (d) 350

15. Which pair of numbers is co-prime?
(a) 12 and 18 (b) 14 and 21 (c) 10 and 20 (d) 8 and 9

16. If 1 unit length represents 10 vehicles, how many vehicles are represented by a bar of heights 6 units?
(a)60 (b) 600 (c) 10 (d) 100

17. In a bar graph, bars of uniform width are drawn horizontally or vertically with spacing between them.
(a) Unequal (b) equal (c) difficult (d) none of these

18. Which of the following sets of numbers adds up to 24,539?
(a) 5-digit number = 21,000, 3-digit number = 539
(b) 5-digit number = 20,000, 3-digit number = 439
(c) 5-digit number = 22,000, 3-digit number = 539
(d) 5-digit number = 24,000, 3-digit number = 539

19. Assertion (A): The sum of angles on a straight line is 180°.
Reason (R): A straight angle measures 180°.
(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) A is true, but R is false.
(d) A is false, but R is true.

20. Assertion (A): The prime factorisation of 56 is $2 \times 2 \times 2 \times 7$.
Reason (R): A composite number can be expressed as a product of only prime numbers in one unique way (order may differ).
(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) A is true, but R is false.
(d) A is false, but R is true.

Section B

Do as directed **2 x 5 =10**

21. Draw an acute angle and label it as ∠XYZ.

22. I am a 5-digit palindrome. I am an odd number.
My 't' digit is double of my 'u' digit.
My 'h' digit is double of my 't' digit.
Who am I?

or

Create a 4-digit number where the digit sum is 16 and the number is a palindrome. Provide the number.

23. Is the first number divisible by the second?
(a) 150 and 25
(b) 84 and 12

or

Find all the multiples of (a) 13 up to 100 (b) 15 up to 95

24. Find out the missing numbers and figure out what the pattern rule is for each box.
(a) 17, 20, 23, 26, 29, ____, ____

(b) ____ , _____ , 36, 45, 54, 63, 72.

25. Following are the marks obtained by 20 students in Geography. Arrange these marks in a table using tally marks.

5	8	6	8	2	3	9	6	6	7
8	9	5	8	3	9	7	6	5	6

Section C

Solve the following **3 x 6 = 18**

26. A number is divisible by both 5 and 12. By which other number will that number be always divisible?

27. Give a diagrammatic representation of triangular numbers.

28. The time now is 02:15. How many minutes until the clock shows the next palindromic time?

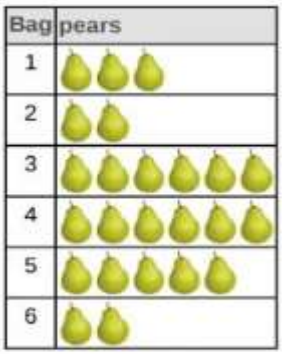
29. The numbers 13 and 31 are prime numbers. Both these numbers have same digits 1 and 3. Find such pairs of prime numbers up to 100.

30. Draw a line segment of 5 cm. At its midpoint, draw a perpendicular line segment. What type of angle is formed between the two-line segments? (using rounder)

31. The following pictograph shows the number of pears in 6 bags . Find the following:

 = 10 Pears

(a) Bag with the maximum number of pears.
(b) Bag with the minimum number of pears.
(c) Total number of pears in all the bags.



Section D

Do as directed **5 x 4 = 20**

32. A survey showed the preference of different subjects by students of class VI
Draw a pictograph to illustrate the above data, taking a proper scale.

Subjects	English	Hindi	Maths	Science	Social
No. of students	25	30	50	35	40

33. Construct an angle bisector divides ∠XYZ into two angles of ∠XYB and ∠BYZ.
If ∠XYZ=90°, find ∠XYB and ∠BYZ.

34. What is the smallest number whose prime factorization has:
(a) Three different prime numbers?
(b) Five different prime numbers?

or

Answer the following Questions.
(a) Write all the factors of 120.
(b) Find the common factors of 5 and 15.
(c) Write down separately the prime and composite numbers less than 20.
(d) What is the greatest prime number between 1 and 10?
(e) Express the given number as sum of two odd primes : 18

35. We are the group of 5-digit numbers between 40,000 and 80,000 such that all of our digits are even. Who is the largest number in our group? Who is the smallest number in our group? Who among us is the closest to 60,000?

Section E

Solve the following **4 x 3 = 12**

36. Reversing and adding a 2-digit number repeatedly always give a palindrome?
Prove this with the help of two examples.

37. A school is setting up a new library and wants to organize books into shelves. There are 24 science books and 36 math books. The school wants to arrange the books on shelves such that each shelf has the same number of books of each subject, and the number of shelves is minimized.
(a) What is the largest number of books that can be placed on each shelf?
(b) How many shelves are needed for science books?
(c) How many shelves are needed for math books?
(d) What is the total number of shelves required?

38. A railway train has coaches numbered in a pattern: S1, S2, S3, … up to S20.
Each sleeper coach has 72 seats.
Answer the following questions with the help of the above data.
(a) Write the numbers of the 5th, 8th and 12th coaches.
(b) If the numbering continues, what will be the 25th coach number?
(c) How many total seats are there in the first 10 coaches?
(d) If your ticket says S15, seat 45, explain what that means in this pattern.

ALL THE BEST