



BK BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY | CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
MID-TERM EXAMINATION 2023-24



MATHEMATICS

Class :VI
Date :11-10-23
Admission No.:

Duration : 3 Hrs
Max. Marks : **80**
Roll No.:

General Instructions:

1. This Question Paper has 5 Sections A, B, C, D and E.
2. Section A has 20 MCQs carrying 1 mark each
3. Section B has 5 questions carrying 02 marks each.
4. Section C has 6 questions carrying 03 marks each.
5. Section D has 4 questions carrying 05 marks each.
6. Section E has 3 case based integrated units of assessment (04 marks each) with sub-parts of the values of 1, 1 and 2 marks each respectively.
7. All Questions are compulsory. However, an internal choice in 2 Qs of 5 marks, 2 Qs of 3 marks and 2 Questions of 2 marks has been provided. An internal choice has been provided in the 2marks questions of Section E
8. Draw neat figures wherever required.

SECTION A

Section A consists of 20 questions of 1 mark each.

- | | | |
|----|--|---|
| 1 | The greatest 5-digit number is | 1 |
| | (a) 99999 (b) 100000 (c) 98765 (d) 56789 | |
| 2 | A flask has 5 litres of lemonade. How many glasses, each of 200mL capacity, can it fill? | 1 |
| | (a) 25 (b) 35 (c) 45 (d) 15 | |
| 3. | Smallest 8-digit number is | 1 |
| | (a) 10000001 (b) 99999999 (c) 10000000 (d) 999999998 | |
| 4. | Sunny is a famous cricket player. He has so far scored 7,280 runs in test matches. He wishes to complete 10,000 runs. How many more runs does he need? | 1 |
| | (a) 2520 (b) 2500 (c) 2720 (d) 2000 | |
| 5. | The difference of smallest 3-digit number and its predecessor is | 1 |
| | (a) 1 (b) 0 (c) 2 (d) 100 | |
| 6. | The natural numbers along with zero is known as | 1 |
| | (a) integers (b) whole numbers (c) super natural numbers (d) none of these | |
| 7. | Which whole number does not have a predecessor? | 1 |
| | (a) 1 (b) 0 (c) 2 (d) 100 | |

8. The tally mark III shows frequency 1
 (a) 5 (b) 3 (c) 2 (d) none of these
9. Least number of line segments required to make a polygon is 1
 (a) 1 (b) 2 (c) 3 (d) 4
10. How many lines can be drawn through given two points? 1
 (a) Only one (b) 2 (c) 4 (d) Countless
11. What are two numbers called having only 1 as a common factor? 1
 (a) Co-prime numbers (b) Twin prime numbers (c) Composite numbers (d) Prime numbers.
12. Which of these is the factor of 50. 1
 (a) 10 (b) 3 (c) 7 (d) 6
13. What is the sixth multiple of 13? 1
 (a) 78 (b) 65 (c) 52 (d) 91
14. Which of them is a prime number? 1
 (a) 13 (b) 14 (c) 28 (d) 25
15. The area of rectangle whose length is 15 cm and breadth is 6 m 1
 (a) 9000 cm² (b) 90 cm² (c) 9 cm² (d) 900 cm²
16. One side of a regular pentagon is 5 cm. Its perimeter is: 1
 (a) 10 cm (b) 25 cm (c) 15 cm (d) 50 cm
17. The distance around a two dimensional shape is: 1
 (a) Area (b) Perimeter (c) Diagonal (d) None of these
18. The perimeter of regular hexagon is 1
 (a) $4 \times n$ (b) $5 \times n$ (c) $6 \times n$ (d) None of these
19. DIRECTION: In the question number 19 and 20, a statement of assertion (A) is followed by a statement of Reason (R). 1
 Choose the correct option
 Statement A (Assertion): Perimeter of a rectangle = $2(l+b)$.
 Statement R (Reason): Rectangle is a regular polygon.
 (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)
 (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A)
 (c) Assertion (A) is true but reason (R) is false.
 (d) Assertion (A) is false but reason (R) is true. 1

20. Statement A (Assertion): -Data represented in a table using pictures is known as pictograph. 1
 Statement R (Reason): Frequency is the number of times particular observation repeats itself.
 (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)
 (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A)
 (c) Assertion (A) is true but reason (R) is false.
 (d) Assertion (A) is false but reason (R) is true.

SECTION B

Section A consists of 5 questions of 2 mark each.

- 21 Two sides of a triangle are 12 cm and 14 cm. The perimeter of the triangle is 36 cm. What is its third side? 2

Or

Find the perimeter of a rectangle with length 4 m and breath 5m.

- 22 In an English test, the following marks were obtained by 40 students. Arrange these marks in a table using tally marks. 2
 8 ,1, 3, 7, 6, 5, 5, 4, 4, 2, 4, 9, 5, 3, 7, 1, 6, 5, 2, 7, 7, 3, 7, 4, 2, 8, 9, 5, 8, 6, 7, 4, 5, 6, 9, 6, 4, 4, 6, 5.

23. Write all the factors of the following numbers : 2
 (a) 24 (b) 15

Or

Write down the first five multiples of

(a) 3 (b) 5

24. Of 7, 12,540 and 71, 25,400 which number is greater and by how much? 2
25. Give one example for each of the following properties for whole numbers. 2
 (a) Closure property
 (b) Commutative property

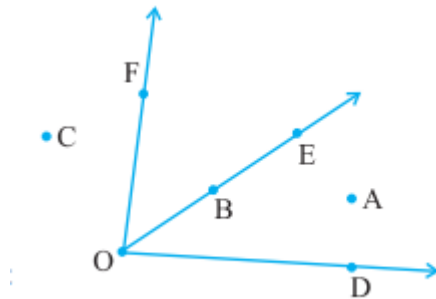
SECTION C

Section C consists of 6 questions of 3 marks each.

27. Using divisibility tests, determine which of the following numbers are divisible by 11: 3
 (a) 5445 (b) 10824 (c) 7138965
 Or
 Using divisibility tests, determine which of the following numbers are divisible by 6:
 (a) 297144 (b) 1258 (c) 4335
28. Draw rough diagrams to illustrate the following : 3
 (a) Open curve (b) Closed curve (c) Polygon.
29. In the given diagram, name the point(s) 3
 (a) In the interior of $\angle DOE$

(b) In the exterior of $\angle EOF$

(c) On $\angle EOF$



- 30 Find the cost of fencing a rectangular park of length 175 m and breadth 125 m at the rate of Rs.12 per metre. 3

Or

Find the cost of fencing a square park of length of one side as 120 m at the rate of Rs.15 per metre.

31. Following is the choice of fruits of 30 students of Class V : 3
Orange,Guava,Apple,Guava,Orange,Guava,Apple,Guava,Orange,Guava,Apple,Guava,Apple,Gr
apes,Apple,Grapes,Apple,Grapes,Apple,Grapes,Apple,Grapes,Banana,Grapes,Banana,Grapes,
Banana,Grapes,Banana,Grapes.

(a) Arrange the names of fruits in a table using tally marks.

(b) Which fruit is preferred by most of the students?

SECTION D

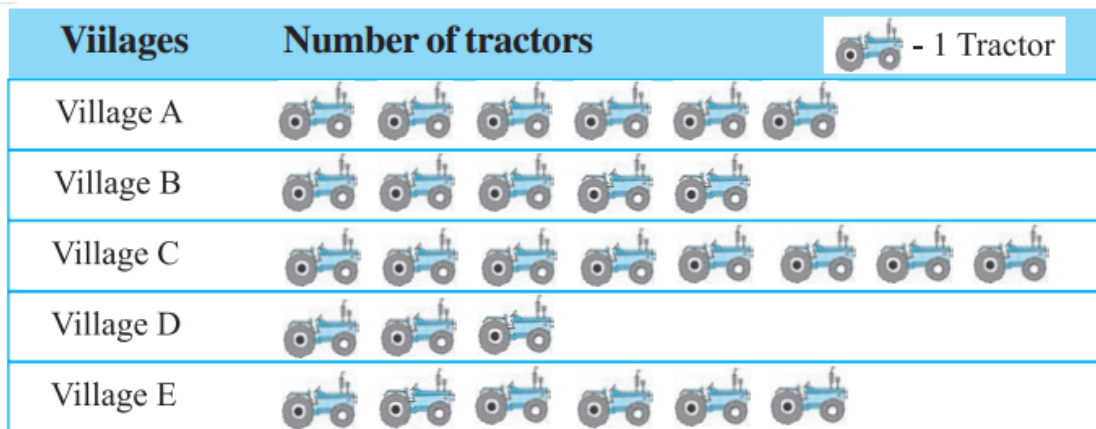
Section D consists of 4 questions of 5 marks each.

32. (a)The area of a rectangular garden 50 m long is 300 sq m. Find the width of the garden. 5
(b) What is the cost of tiling a rectangular plot of land 500 m long and 200 m wide at the rate of Rs. 8 per hundred sq m.?

Or

Five square flower beds each of side 1 m are dug on a piece of land 5 m long and 4 m wide.
What is the area of the remaining part of the land?

33. Following pictograph shows the number of tractors in five villages 5



Observe the pictograph and answer the following questions.

- Which village has the minimum number of tractors?
- Which village has the maximum number of tractors?
- How many more tractors village C has as compared to village B.
- What is the total number of tractors in all the five villages?

34. (a) Determine the smallest 3-digit number which is exactly divisible by 6, 8 and 12. 5

- (b) Determine the greatest 3-digit number exactly divisible by 8, 10 and 12.

Or

The traffic lights at three different road crossings change after every 48 seconds, 72 seconds and 108 seconds respectively. If they change simultaneously at 7:30 a.m. at what time will they change simultaneously again?

35. (a) Three boys step off together from the same spot. Their steps measure 63 cm, 70 cm and 77 cm respectively. What is the minimum distance each should cover so that all can cover the distance in complete steps? 5

- (b) Determine the smallest 3-digit number which is exactly divisible by 6, 8 and 12.

SECTION E

Section E consists of 3 questions of 4 marks each.

36. A florist had 200 roses, 180 marigold and 320 orchids with him. He was asked to make garlands of flowers with only roses or only marigold or only orchids each containing the same number of flowers. 4

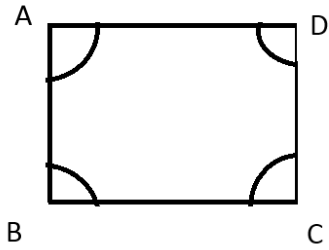
- (a) Write down the prime factorization of 180.

- (b) Write down the L.C.M of 200 and 180 .

(c) What will be the largest number of flowers he can join together without leaving a single flower?

37. A student of class VII made following quadrilateral

4



State:

- (a) two pairs of opposite sides
- (b) two pairs of opposite angles
- (c) two pairs of adjacent sides

38. A machine, on an average, manufactures 2,825 screws a day.

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- (a) How many screws did it produce in the month of January, 2006?
- (b) How many screws did it produce in 1 week?
- (c) How many screws will it produce in the month of February, 2024?

Or

- (c) If it costs Rs.5 to produce one screw, How much will be the cost of production in one day?

END OF PAPER*