BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHO
MIDTERM EXAMINATION 2024-25
MATHEMATICS (041)

B K BIRLA CENTRE
FOR EDUCATION
(Sarala Birla Group of Schools)

INDIAN PUBLIC SCHOOLS'
CONFERENCE

CLASS: VI   Duration: 3 hrs.
Date: 14.09.24   MAX.MARKS:80
Name: Exam RNo:

General Instructions:
1. This Question Paper has 5 Sections A-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) .
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.

SECTION- A $(20 \times 1 = 20)$

Choose the correct answers.

1) In 368041 the place value of 8 is:
   (a) 8000   (b) 800   (c) 80   (d) 80000
2) The smallest 4- digit number having four different digits
   (a) 1023   (b) 1230   (c) 1203   (d) 0123
3) The predecessor of the smallest 4- digit number is
   (a) 99   (b) 999   (c) 1000   (d) 1001
4) The successor of 3799 is
   (a) 3798   (b) 3890   (c) 3800   (d) 3790
5) The whole number occurring just before 567890
   (a) 567891   (b) 567800   (c) 567889   (d) 67888
6) The integer which is 5 more than -2 is
   (a) -7 (b) -3 (c) 3   (d) 7
7) Smallest integer out of $-33, 37, 5, 615, -9$ is
   (a) 5   (b) -9 (c) -33 (d) 615
8) The number of lines that can be drawn passing through two distinct points is
   (a) 1   (b) 2   (c) 3   (d) infinitely many
9) Every polygon has at least _____ sides.
   (a) 1   (b) 2   (c) 3   (d) 4
10) -7 is to the right of _____ on the number line
   (a) -8 (b) -3 (c) -2 (d) -1
11) Which of the following has no end points?
   (a) A line   (b) a ray   (c) a line segment   (d) none of these
12) Which of the following is a composite number?
   (a) 2   (b) 3   (c) 4   (d) 5

13)A number which has only two factors is called a

    (a) Prime number (b) odd number   (c) even number   (d) composite number

14) The perimeter of a triangle of sides 3 cm,4cm,5cm is :

      (a) 5 cm   (b) 9 cm   (c) 12 cm   (d) 10 cm

15) Representation of data in the form of picture is called _____

      (a) Bar graph (b)Pictograph   (c)Histogram   (d) None of these

16) The frequency of the tally mark - ||||

      (a) 6   (b) 4   (c) 10   (d)7

17) In which of the following expressions, prime factorisation has been done?

      (a) $24 = 2 \times 3 \times 4$ (b) $56 = 2 \times 2 \times 2 \times 7$

      (c) $70 = 7 \times 10$ (d) $54 = 2 \times 3 \times 9$

18) Perimeter of a rectangle is

      (a) $l \times b$ (b) b^2 (c) l^2 (d) $2 \times (l + b)$

19)Assertion (A) – The factors of 34 are 1, 2, 17 and 34 itself

      Reason (R) – every factor is less than or equal to the given number.

      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) –Sharper the tip, thinner will be the dot

      Reason (R) –A point determines a location

      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 $(5 \times 2 = 10)$

21) Using the properties of whole numbers, find the value of the following in suitable way:
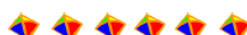
    $4 \times 1769 \times 25$

OR

    How many whole numbers come between 32 and 53?

22) Draw any polygon and shade it's interior.

23) Represent the following numbers on a number line:

    (a) – 10   (b) + 8

OR

    Write all the integers between – 30 and – 23 (write them in the increasing order).

24)The sale of kites on different days of a week is shown below:

Days	Number of kites
Monday	🪁 🪁 🪁
Tuesday	🪁 🪁
Wednesday	🪁 🪁 🪁 🪁 🪁 🪁
Thursday	🪁 🪁 🪁 🪁 🪁 🪁 🪁 🪁
Friday	🪁 🪁 🪁 🪁 🪁 🪁

(🪁 = 4 kites)

Observe the pictograph and answer the following questions:

    a) How many kites were sold on Friday?

b) On which day the maximum number of kites was sold?
c) On which day same number of kites was sold?
d) On which day minimum number of kites was sold?

25) Find the perimeter of following figure:
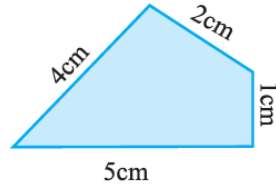
SECTION -C $(6 \times 3 = 18)$

26) Find the difference between the greatest and the least 5-digit number that can be written using the digits 6, 2, 7, 4, 3 each only once.

27) A taxi driver filled his car petrol tank with 40 litres of petrol on Monday. The next day, he filled the tank with 50 litres of petrol. If the petrol costs Rs. 44 per litre, how much did he spend in all on petrol.

OR

In the following pairs of numbers given below, state in which the whole number is on the left of another number on the number line. Also, write them with the appropriate sign (>, <) between them: 2536 and 2563

28) A piece of string is 60 cm long. What will be the length of each side if the string is used to form:
    (a) A square?   b) An equilateral triangle?

29) Mohan threw a dice 40 times and noted the number appearing each time as shown below:
    Make a table and enter the data using tally marks.
    (a) Find the number that appeared minimum number of times
    (b) Find those numbers that appear an equal number of times.

1	3	5	6	6	3	5	4	1	6
2	5	3	4	6	1	5	5	6	1
1	2	2	3	5	2	4	5	5	6
5	1	6	2	3	5	2	4	1	5

30) In the given diagram, name the point(s)
    (a) In the interior of ∠DOE
    (b) In the exterior of ∠EOF
    (c) On ∠EOF
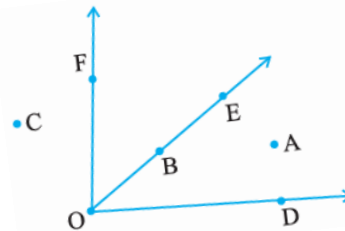
31) Draw a number line and answer the following:
    (a) Which number will we reach if we move 4 numbers to the right of – 2.
    (b) Which number will we reach if we move 5 numbers to the left of 1.

OR

Find the sum:
    (a) $(-7) + (-9) + 4 + 16$ (b) $(37) + (-2) + (-65) + (-8)$

32) The length, breadth and height of a room are 825 cm, 675 cm and 450 cm respectively. Find the longest tape which can measure the three dimensions of the room exactly,
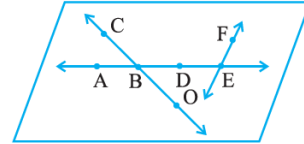
OR

Using the divisibility test, determine which of the following are divisible by 2, 3, 4, 5 and 10 (give the reason).

(a) 572   (b) 72635   (c) 12159   (d) 3150

33) Observe the adjoining fig. and write the name(s) :

(a) Line containing point E.

(b) Line passing through A.

(c) Line on which O lies

(d) Two pairs of intersecting lines.

34) A floor is 5 m long and 4 m wide. A square carpet of sides 3 m is laid on the floor. Find the area of the floor that is not carpeted.

OR

Split the following shapes into rectangles and find their areas. (The measures are given in centimetres)
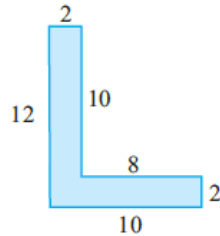
35) Find the value of the following:

a) $297 \times 17 + 297 \times 3$

b) 854×102

SECTION -E $(3 \times 4 = 12)$

36) Two tankers contain 250 litres and 350 litres of kerosene oil respectively. Find the maximum capacity of a container which can measure the kerosene oil of both the tankers when used an exact number of times.

a) Find the prime factor of 250 and 350.

b) Find the HCF of 250 and 350.

37) Population processes are typically characterized by processes of birth and immigration, and of death, emigration and catastrophe, which correspond to the basic demographic processes and broad environmental effects to which a population is subject.
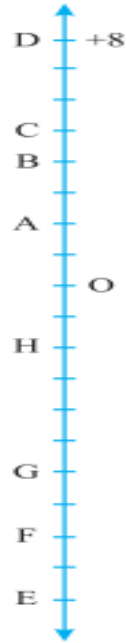
The population of Telangana state in 2011 was 35193978 and the estimated population of the state in 2023 is 38157311. Based on the above information, answer the following questions.

a) Write the population of 2023 in words.

b) Write the place value of '1' in 35193978.
c) Write the population of 2011 in Indian system of numeration and also in International system of numeration.

38) Adjacent figure is a vertical number line, representing integers. Observe it and locate the following points:
a) If point D is + 8, then which point is – 8?
b) Is point G a negative integer or a positive integer?
c) Which point marked on this number line has the least value?
d) Arrange all the points in decreasing order of value.

*********************************THE END**