BK BIRLA CENTRE FOR EDUCATION

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

CLASS:VI   Duration: 3 hrs.
Date: 21.03.25   MAX.MARKS:80
Name: Exam R,No:

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) .**

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

Choose the correct answer.

1) Which of the following is an obtuse angle?
   (a) 90°   (b) 45^0 (c) 180^0 (d) 135^0
2) Which of the following represents an angle 180° between the hands of a clock at _____
   (a) 6.30 P.M   (b) 6.00 P.M   (c) 8.45 P.M   (d) 12:00 P.M
3) How many right angles makes a complete angle?
    (a) 1   (b) 2   (c) 3   (d) 4
4) The ratio of 30 minutes to 45 minutes is
   (a) 3 : 4   (b) 4 : 3   (c) 1 : 2   (d) 2 : 3
5) The expression for "8 added to 2 times p" is
   (a) 8 + p   (b) 8 +2 p   (c) p + 16   (d) 16p
6) Rule for pattern of letter L using u as variable
    (a) u   (b) 3u   (c) 2u   (d) 4u
7) Which is greater 2.5 or 2.155?
   (a) 2.155   (b) Both are equal   (c) 2.5   (d) Can't compare
8) On the number line, the integer 5 is located
   (a) To the left of 0 (b) To the right of 0   (c) To the left of 1   (d) To the left of -2
9) Every integer less than 0 has the sign
   (a) −   (b) ×   (c) ÷   (d) +
10) Which of the following number is greater than -1?
   (a) -10   (b) 0   (c) – 2   (d) -3
11) What are the fractions with the same denominator called?
   (a) Unit fractions (b) Unlike fractions   (c) Like fractions   (d) none of these

12) The simplest form of 15/75 is _____
    (a) 1/2   (b) 1/5   (c) 1/4   (d) None of these
13) What is the fractional form of five eighteenths?

(a) 15/18   (b) 18/5   (c) 5/18   (d) None of these

14) 8888 m in Km can be written as:

   (a) 88.88 Km   (b)   888.8 Km   (c) 8.888 Km   (d) None of these

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

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

16) The collected information is called _____

   (a) Observations (b) Data   (c) Mean   (d) None of these

17) 5.008 can be written in words as:

   (a)) Five thousand eight   (b) Five point eight

   (c) Five point zero zero eight   (d) None of these

18) 18) In the below figure, the ratio of the shaded parts to unshaded parts is

(a) 1 : 2   (b) 8 : 5   (c) 3 : 5   (d) 5 : 3

19) Assertion: The improper fraction 33/4 in the form of a mixed fraction is $8(\frac{1}{4})$

   Reason: $8(\frac{1}{4}) = \frac{[(8\times4)+1]}{4} = \frac{33}{4}$

   a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion

   b) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion

   c) Assertion is true but the reason is false.

   d) both assertion and reason are false.

20) Assertion (A) –on dividing a decimal by 100, the decimal point is shifted to the left by two places.

Reason: 75/100 = 0.75.

   a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion

   b) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion

   c) Assertion is true but the reason is false.

   d) both assertion and reason are false.

SECTION -B $(5 \times 2 = 10)$

21) Which direction will you face if you start facing?

    a) East and make $\frac{1}{2}$ of a revolution clockwise?

    b) West and make $\frac{3}{4}$ of a revolution anti-clockwise?

OR

  Where will the hour hand of a clock stop if it starts

    a) From 6 and turns through 1 right angle?
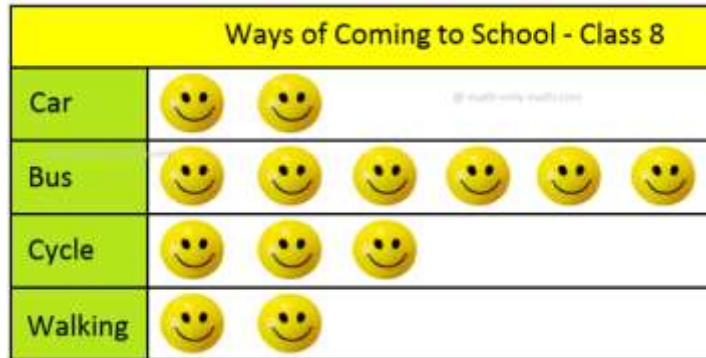
    b) From 8 and turns through 2 right angles?

22) Radhika's mother gave her Rs 10.50 and her father gave her Rs 15.80. Find the total amount given to Radhika by the parents.

23) Represent the following numbers on a number line:
   i)   (a) – 10   (b) + 6

OR

   Write four negative integers greater than – 20.

24) This pictograph shows the different ways students from class 8 come to school.
   Study the pictograph and answer the questions.

   😊 = Stands for 10 children

Ways of Coming to School - Class 8	
Car	😊 😊
Bus	😊 😊 😊 😊 😊 😊
Cycle	😊 😊 😊
Walking	😊 😊

   a) What does each symbol stand for?
   b) How many students come to school by bus?
   c) How many less students walk than cycle to school?
   d) Which are the two equally used ways of coming to school?

25) Leela is Radha's younger sister. Leela is 4 years younger than Radha. Can you write Leela's age in terms of Radha's age? Take Radha's age to be x years.

SECTION -C   (**6 × 3 = 18**)

26) Draw number lines and locate the points on them: $\frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{8}{5}$

27) Samson travelled 5 km 52 m by bus, 2 km 265 m by car and the rest 1km 30 m he walked. How much distance did he travel in all?

OR

   Express following as instructed by using decimal:
   a) 850 paise (in Rs)
   b) 62 g (in kg)
   c) 7 mm (in cm)

28) How many right angles do you make if you start facing:
   a) south and turn clockwise to west?
   b) north and turn anti-clockwise to east?
   c) west and turn to west?

29) Write the natural numbers from 2 to15. What fraction of them are prime numbers?

30) Determine if the following ratios form a proportion. Also, write the middle terms and extreme terms where the ratios form a proportion.
                 25 cm : 100 cm and Rs 40 : Rs 160

31) Draw a number line and answer the following:
   c) Which number will we reach if we move 4 numbers to the right of – 2.
   d) Which number will we reach if we move 5 numbers to the left of 1.

OR

Find the sum:
a) $(– 7) + (–16) + 4 + 16$ b) $(18) – (– 20) – (–15) + (– 8)$

SECTION -D $(4 \times 5 = 20)$

32) In a class A of 25 students, 20 passed in first class; in another class B of 30 students, 24 passed in first class. In which class was a greater fraction of students getting first class?

OR

Naina was given $1\frac{1}{2}$ piece of cake and Najma was given $1\frac{1}{3}$ piece of cake. Find the total amount of cake was given to both of them.

33) Classify each one of the following angles as right, straight, acute , reflex or obtuse :

34) Cost of a dozen bananas is Rs 180 and cost of 8 lemons is Rs 56. Find the ratio of the cost of a banana to the cost of a lemon.

OR

Mihir earns Rs 24000 in 8 months.
   a) How much does he earn in one year?
   b) How much will he earn in 5 months?

35) In an examination, the grades achieved by 40 students of a class are given below
   B, C, C, E, A, C, B, B, D, D, D, D, B, C, C, C, A, C, B, E, A, D, C, B, E, C, B, E, C, D, A, B, C, E, D, D, A, A, C, E
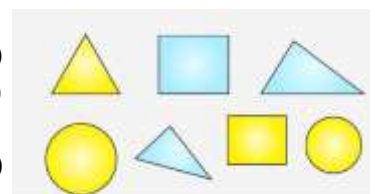   a)   Arrange the grades using tally marks
   b)   How many students get grade A?
   c)   Which grade is achieved by maximum number of students?

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

36) See the figure and find the ratio of
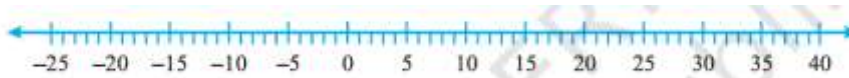
   a) Number of triangles to the number of circles inside the rectangle. (1)
   b) Number of squares to all the figures inside the rectangle.   (1)
   c) Number of circles to all the figures inside the rectangle.   (1)
   d) Number of triangles to all the figures inside the rectangle.   (1)

37) Following is the list of temperatures of five places in India on a particular day of the year.
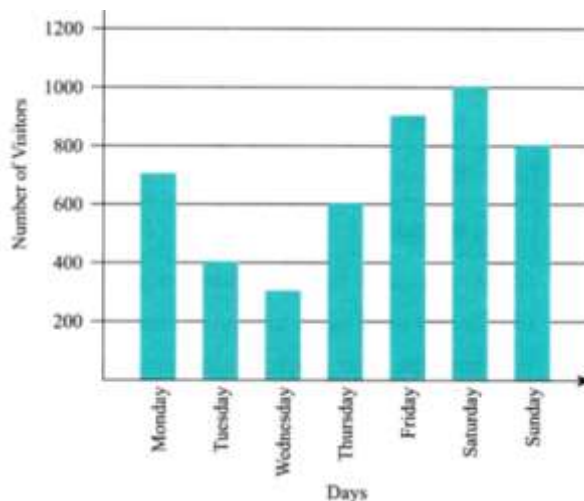
	Place	**Temperature**	
a)	Siachin	10°C below 0°C	....
b)	Shimla	2°C below 0°C	....
c)	Ahmedabad	30°C above 0°C	....
d)	Delhi	20°C above 0°C	....

i)   Write the temperatures of these places in the form of integers in the blank column.   (1)
ii) Represent the temperature in degree Celsius on the following number line.   (1)
iii) Write the name of the city against its temperature   (1)

iv) Which is the coolest place?   (1)

38) The number of visitors visited the mall during a week is given below. Observe the graph and answer the following

(a) How many visitors visited on Thursday?   (1)
(b) On which day, the number of visitors was maximum and minimum?   (1)
(c) Which is greater – total number of visitors on Thursday and Tuesday or total number of visitors on Saturday and Wednesday?   (2)

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