

ARMY PUBLIC SCHOOL SHILLONG
ANNUAL EXAMINATION 2022-23
SUBJECT: MATHEMATICS
CLASS: VI

Time: 2 hours 30 minutes

Maximum Marks: 80

General instructions:

- *All questions are compulsory. There are thirty-nine questions in all.*
- *The question paper is divided into five sections.*
- *Section A has 20 questions of 1 mark each, section B has 8 questions of 2 marks each, section C has 4 questions of 3 marks each, section D has 5 questions of 4 marks each and section E has 2 questions of 6 marks each.*
- *There is no overall choice in the question paper. However internal choice has been provided in few questions of section B, C and D.*

SECTION: A

Fill in the blanks:

- 1) $(-8) + \underline{\quad} = 0$ 1
a) -8 b) 8 c) 0 d) 1
- 2) is the collection of numbers gathered to give some informations. 1
a) Data b) Pictograph c) Bargraph d) Tally marks
- 3) A regular has five equal sides. 1
a) hexagon b) pentagon c) square d) none
- 4) A matchstick pattern of letter Z is given by the rule . 1
a) $2n$ b) $3n$ c) $4n$ d) n
- 5) Two quantities can be compared only if they are in the same . 1
a) unit b) size c) shape d) length

State true or false:

- 6) The additive inverse of 7 is -7. 1
- 7) A pictograph represents data through pictures of objects. 1
- 8) Area is the distance covered along the boundary forming a closed figure. 1
- 9) The value of a variable is fixed. 1
- 10) The line symmetry is closely related to mirror reflection. 1






Choose the correct option:

- 11) The sum of two negative number is always 1
a) negative b) positive c) 0 d) 1

- 12) Identify the instruments used to bisect an angle 1
 a) A scale and a protactor b) scale and compass
 c) scale and set squares d) a scale
- 13) Which formula will be used to find the area of the wall of your classroom? 1
 a) $l \times b$ b) $\frac{1}{2} (l \times b)$ c) $l + b$ d) $2(l + b)$
- 14) The radius of a circle is r , its diameter will be 1
 a) $2r$ b) $3r$ c) $4r$ d) $5r$
- 15) Which of the following is the expression for '3 added to the sum of 9 and x '? 1
 a) $3x + 9$ b) $9x + 3$ c) $(x + 9) + 3$ d) $3x + (3 \times 9)$
- 16) Which of the following letters has horizontal line of symmetry? 1
 a) A b) C c) J d) L
- 17) There are 30 boys and 20 girls in the class. The ratio of number of girls to the number of boys is 1
 a) 2:3 b) 3:2 c) 2:5 d) 3:5
- 18) Which of the following are in proportion? 1
 a) 15,45,40,120 b) 4,6,12,20 c) 24,28,36,48 d) 30,40,50,60
- 19) How many lines of symmetry an equilateral triangle have? 1
 a) 2 b) 3 c) 1 d) 0
- 20) X and Y are two distinct point on a plane. How many lines can be drawn passing through both X and Y. 1
 a) 0 b) 1 c) only 2 d) infinitely many

SECTION: B

- 21) Find the sum of -312 , 390 and 262 2
- 22) Write all the integers between 0 and -9. 2
- 23) Mr. Rajan made a pictograph given below to show the number of cars washed at a car washing station during three days of a week. 2

Days	Number of cars washed	One  = 5 cars
Friday		
Saturday	 	
Sunday		

From the pictograph, find that :

- (a) On which day the maximum number of cars were washed at the station?
 - (b) On which day the minimum number of cars were washed at the station?
- 24) Find the cost of fencing a square park of side 250 m at the rate of Rs.20 per meter. 2

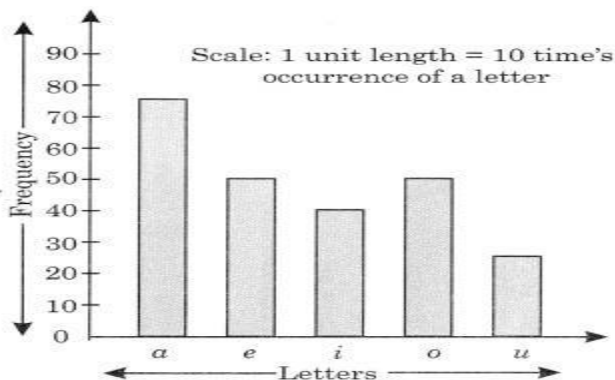
OR

The perimeter of a regular pentagon is 100cm. How long is its each side?

- 25) Leela is Radha's younger sister. Leela is 4 years younger than Radha. Write Leela's age in terms of Radha's age. Take Radha's age to be x years. 2
- 26) Cost of a dozen ball pen is Rs.240 and cost of 8 gel pen is Rs 64.Find the ratio of cost of a ball pen to the cost of a gel pen. 2
- 27) Name A-Z alphabets with no line of symmetry. 2
- 28) Draw a circle of radius 3.5cm. 2

SECTION: C

- 29) The given bar graph represents the frequency of a, e, i, o, and u in a piece of English writing. 3



- (a) Which letter occurred the maximum number of times?
 - (b) Which letter occurred 40 times?
 - (c) Which letter occurred less than 30 times?
- 30) Cost of 5kg of wheat is Rs. 92.50. 3
- a) What will be the cost of 8 kg of wheat?
 - b) What quantity of wheat can be purchased for Rs. 185?

- 31) Sketch the following 3
- a) A quadrilateral with both horizontal and vertical lines of symmetry.
 - b) A hexagon with six lines of symmetry.

- 32) Draw any line segment PQ. Mark any point M on it. Through M, draw a perpendicular to AB. 3

OR

Draw a right angle and construct its bisector.

SECTION: D

- 33) Draw a number line and answer the following: 4
- (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.
 - (c) If we are at -8 on the number line, in which direction should we move to reach -13?
 - (d) If we are at -6 on the number line, in which direction should we move to reach -1?

OR

Using the number line write the integer which is:

- a) 3 more than 5
- b) 5 more than -5
- c) 6 less than 2
- d) 3 less than -2

- 34) The result of a Mathematics test is as follows: 4
- 80, 90, 70, 80, 80, 60, 80, 70, 90, 65, 100, 60, 70, 60, 70, 85, 65, 70, 70, 85, 90, 60, 65, 80, 60

Make a frequency table for the above data and answer the following questions:

- (a) What is the maximum marks obtained?
 - (b) How many students score less than 75 marks?
- 35) A piece of string is 84 cm long. What will be the length of each side if the string is used to form 4
- (a) a square? (b) a regular hexagon?
- 36) The number of rooms on the ground floor of a building is 12 less than the twice of the number of rooms on first floor. If the first floor has x rooms, how many rooms does the ground floor has? 4

OR

Take Sarita's present age to be y years

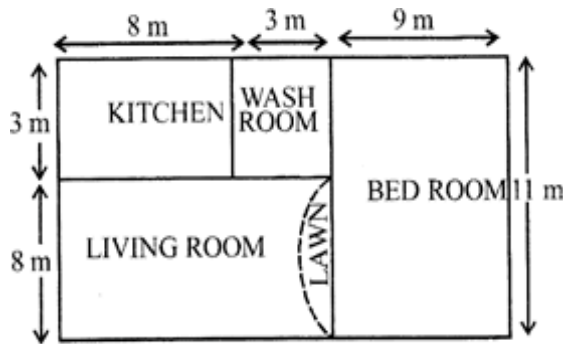
- (i) What will be her age 5 years from now?
- (ii) What was her age 3 years back?
- (iii) Sarita's grandfather is 6 times her age. What is the age of her grandfather?
- (iv) Grandmother is two year younger than grandfather. What is grandmother's age?

37) Draw a circle with centre C and radius 3.4cm. Draw any chord AB . Construct the perpendicular bisector of AB and examine it passes through C .

4

SECTION: E

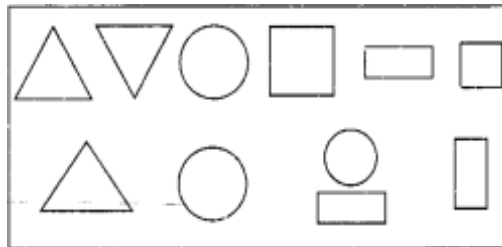
38) Following is the arrangement of various room in a house.



(2+2+2)

- a) Find the perimeter of the kitchen
- b) Find the area of the bedroom.
- c) Find the cost of tiling the washroom at rate Rs. 100 per square meter.

39) See the figure and find the ratio of :



(2+2+2)

- a) Number of circles to the number of triangles.
- b) Number of squares to all the figures inside the rectangle.
- c) Number of circles to all the figures inside the rectangle.
