



## Annual Examination 2022-23

**SUBJECT: MATHEMATICS**  
**CLASS: VI**

**Time: 3 HRS**  
**MM: 80**

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### General Instructions:

- All questions are compulsory.
  - This question paper contains **7 questions** which is subdivided into 31 questions distributed into four Sections A, B, C and D.
  - Section A** comprises 10 questions of 1 mark each. **Section B** comprises of 2 questions of **10 marks** each and 1 qns of 5 marks. **Section C** comprises 10 questions of **2 marks** each and **Section D** comprises 7 questions of 3 marks each and 1 question of **4 marks**.
  - Use of Calculators is not permitted.
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### Section - A

**1. Choose the correct options-**

1 x 10

- The ratio of the number of sides of a square to the number of edges of a cube is  
(a) 1:2    (b) 3:2    (c) 4:1    (d) 1:3
- The instrument in the geometry box having shape of a triangle is called a  
(a) protractor    (b) compass    (c) divider    (d) set square
- Which of the following represent  $6 \times b$ ?  
(a)  $6b$     (b)  $6/b$     (c)  $6+b$     (d)  $6-b$
- Two regular hexagons of perimeter 30 cm each are joined as shown in the given figure. The perimeter of the new figure is



- (a) 65 cm    (b) 60 cm    (c) 55 cm    (d) 50 cm

e) Using tally marks, which one of the following represents the number eight?



f) Which of the following decimals is the greatest?

(a) 0.182 (b) 0.0925 (c) 0.29 (d) 0.038

g) When a negative integer is subtracted from another negative integer, the sign of the result

- (a) is always negative
- (b) is always positive
- (c) is never negative
- (d) depends on the numerical value of the integers

h) Measures of the two angles between hour and minute hands of a clock at 9 O'clock are



(a) 60, 300" (b) 270°, 90° (c) 75 285 (d) 30", 330"

i) One million is equal to

(a) 1 lakh (b) 10 lakh (c) 1 crore (d) 10 crore

j) The side of a square is 10 cm. How many times will the new perimeter become, if the side of the square is doubled?

(a) 2 times (b) 4 times (c) 6 times (d) 8 times

## Section - B

### 2. True/ False

1 x 10

- a) If a whole or an object is divided into a number of equal parts, then each part represents a fraction.
- b) To represent the population of different towns using bar graph, it is convenient to take one unit length to represent one person.
- c) Two line segments may intersect at two points.
- d) The sum of any two negative integers is always greater than both the integers.
- e) If a whole or an object is divided into a number of equal parts, then each part represents a fraction.
- f) Pictographs and bar graphs are pictorial representations of the numerical data.
- g) A farmer who wants to fence his field, must find the perimeter of the field.

- h) In an equation, the LHS is not equal to the RHS.
- i) The two terms of a ratio can be in two different units.
- j) A right angled triangle can have at most one line of symmetry.

**3. Match the following-**

1 x 5

- |                   |  |
|-------------------|--|
| a) Obtuse angles  | i) 35  |
| b) 10             | ii) Acute angled triangle                                    |
| c) 3 Acute angles | iii) Between $\frac{1}{4}$ and $\frac{1}{2}$ of a revolution |
| d) $-10 -11$      | iv) Decagon  |
| e) $20 -25 +40$   | v) 21  |

**4. Fill in the blanks -**

1 x 10

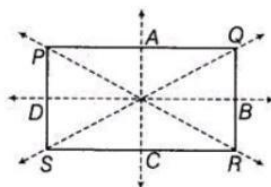
- a)  $1 \text{ sq m} = 1 \text{ m} \times \text{m} = 100 \text{ cm} \times \dots\dots\dots \text{ cm}$ .
- b) A..... is a collection of numbers gathered to give some meaningful information.
- c) The line of symmetry of a line segment is the..... bisector of the line segment.
- d) If two ratios are equal, then they are in.....
- e) 8 more than three times the number 'x' can be written as.....
- f) The amount of region enclosed by a plane closed figure is called.....
- g) A..... represents data through pictures of objects.
- h) A fraction with denominator greater than the numerator is called.....fraction.
- i) The additive inverse of 0 is .....
- j) An angle greater than  $180^\circ$  and less than a complete angle is called.....

**Section C**

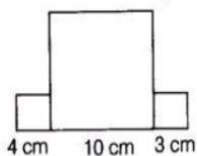
**5. Two marks question.**

2 x 10

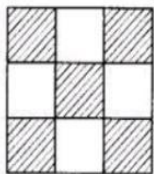
- a) In figure, PQRS is a rectangle. State the lines of symmetry of the rectangle.



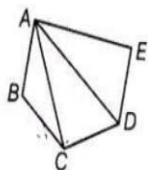
- b) Reshma prepared 18 kg of Burfi by mixing Khoya with sugar in the ratio 7:2. How much khoya did she use?
- c) What is the area of a square whose side is m cm?
- d) Three squares are joined together as shown in the given figure. Their sides are 4 cm, 10 cm and 3 cm. Find the perimeter of the figure.



- e) Construct  $90^\circ$  with the help of ruler and compasses.  
 f) Write the fraction which is represented by the unshaded portion in the following figure and tell whether it is proper or improper fraction-



- g) Write the integer which is 4 more than its additive inverse.  
 h) Name the vertices and the line segments in the given figure.

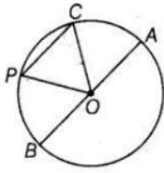


- i) With the same centre O, draw two circles of radii 4 cm and 2.5 CM. Mark a point P in the interior of the circle and Q the exterior of the circle.  
 j) Draw a line segment of 7.5cm and construct its bisector. Write the steps of construction.

## Section D

6. Three marks question.

- a) Write the fraction representing the total number of natural numbers in the collection of numbers. -3, -2, -1, 0, 1, 2, 3. What fraction will it be for whole numbers? What fraction will it be for integers? 3
- b) Draw an angle of  $75^\circ$ . Copy its supplementary angle. Write the steps. 3
- c) Solve it - 3  
 i)  $3\frac{3}{4} + 4\frac{1}{3}$       ii) ₹200.85 – ₹119.7
- d) A piece of string is 48cm long. What will be the length of each side if the string is used to form- 3  
 i) Square    ii) Equilateral triangle    iii) Regular hexagon
- e) In the given figure, O is the centre of the circle. 3  
 i) Name all chords of the circle.  
 ii) Name all radii of the circle.  
 iii) Name a chord, which is not the diameter of the circle.



f) The number of ATMs of different banks in a city is shown below. 3

Bank	Syndicate Bank	Dena Bank	Indian Bank	State Bank of India	Vijaya Bank	PNB
Number of ATMs	10	50	80	30	60	40

Draw a bar graph to represent the above information by choosing the scale of your choice.

g) Avinash works as a lecturer and earns Rs 12000 per month. His wife who is a doctor earns Rs 15000 per month. Find the following ratios: 3

(i) Avinash's income to the income of his wife.

(ii) Avinash's Income to their total income.

7. Find the value of- 4

a)  $3x-4z+2y$  ( $x=3, y=4, z=5$ )

b)  $xy+yz-xz$  ( $x=5, y=8, z=9$ )

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