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### MATHEMATICS CLASS 6

Max. Marks: 90

Time: 2<sup>1</sup>/<sub>2</sub> hours

Instructions:

- 1. This paper consists of four sections.
- 2. Section A has 15 Multiple Choice Questions and each carries 1 mark.
- 3. Section B has 11 questions, each question carries 2 marks.
- 4. Section C has 11 questions, each question carries 3 marks.
- 5. Section D has 5 questions, each question carries 4 marks.
- 6. Use of calculators in not permitted.

### SECTION A

#### (Questions i to xv carry 1 mark each)

### Q 1. Choose the correct answer from the choices given.

i)  $\frac{2}{9} = \frac{-}{18}$  Choose the correct number to fill in the box. d) 6 a) 2 b) 4 c) 1 ii) Which of the following pairs are like fractions? a)  $\frac{3}{7}$  and  $\frac{3}{8}$ b)  $\frac{5}{3}$  and  $\frac{3}{5}$  c)  $\frac{7}{8}$  and  $\frac{3}{8}$  d)  $\frac{1}{2}$  and  $\frac{2}{3}$ iii) The place value of 4 in 13.4 is a) ones b) tens c) hundreds d)tenths iv) The decimal form of  $\frac{5}{100}$  is a) 5 b) 0.5 c) 0.05 d) 0.005 v) Which of the following is greater than 3.53? b) 0.0353 a) 0.353 c) 35.3 d) 0.53 vi) The perimeter of a triangle of sides 3cm, 5cm and 4cm is c) 19cm a) 60cm b) 12cm d) 23cm vii) Choose the correct expression for the statement "y is multiplied by 5 and 11 subtracted from it b) 5y - 11 c) 11 - 5y d) 5 - 11y a) 11y – 5 viii) Which of the following is an equation with a variable? a) 7 - x = 3 b) (t - 9) > 5 c) 14 + 2 = 16 d) (7 - 3) < (9 - 4)ix) The ratio of 3 to 6 is

a) 1:3 b) 1:6 c) 2:1 d) 1:2

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x) Which of the following has 3 lines of symmetry?

a) a scalene triangle b) an isosceles triangle c) a rectangle d) an equilateral triangle

xi)  $\frac{2}{3}$  is greater than a)  $\frac{1}{3}$  b)  $\frac{3}{3}$  c)  $\frac{3}{2}$  d) None of these

xii) Which of the following is an improper fraction?

<b>2</b> )	3	b) 7	c) 11	d) 4
a)	7	b) <u>–</u>	<del>()</del> 9	<sup>u)</sup> 13

xiii) Study the place value table given below. The decimal number given in the table is

	Hundreds		Tens	0	nes	Tenths
	5		3		2	1
a)	53.21 b	) {	5.321	c) (	5321	d) 532.

xiv) In the figure, AB = 3cm, BC = 4cm, CD = 2cm, DE = 3cm and EA=2cm. The perimeter of the figure is

a) 14cm b) 144cm c) 70cm d) 24cm



xv) A man's present age is y. What will be his age after 5 years?a) y + 5 b) 5 - y c) 5y d) y - 5

#### SECTION B (Questions 2 to 12 carry 2 marks each)

- 2. Write two equivalent fractions of  $\frac{2}{3}$
- 3. Find the area of a square of side 10cm.
- 4. Represent  $\frac{1}{4}$ ,  $\frac{3}{4}$  and  $\frac{7}{4}$  on a number line.
- 5. Write the following as decimals

a) 
$$4 + \frac{5}{10} + \frac{3}{100} + \frac{4}{1000}$$

b) 13 + 
$$\frac{6}{10}$$
 +  $\frac{7}{100}$ 

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- 6. Length and breadth of a rectangular field are 50m and 15m respectively. Find the ratio of the length to the breadth of the field.
- 7. Write the following decimals as fractions a) 9.7 b) 2.39
- 8. The number of different types of books in a book shelf is represented by the pictograph given below. Observe the pictograph and answer the questions given below.

Type of book	Number of books( $\Box$ = 10 books)
Novel	
Short stories	
General knowledge	

a) How many General knowledge books are there in the shelf? b) What is the total number of books in the shelf?

- 9. Find the side of a square whose perimeter is 20m.
- 10. Give expressions for the following.

a) x divided by 3	<li>b) 3y subtracted from7</li>
c) 1 is added to 6 times y	d) n is multiplied by 3

- 11. Check whether 15, 45, 40, 120 are in proportion.
- 12. Write the number of lines of symmetry for the following figures. a) a circle b) a rectangle

### SECTION C (Questions 13 to 23 carry 3 marks each)

13. Express the following as mixed fractions

a)  $\frac{13}{5}$ (b)  $\frac{21}{4}$  (c)  $\frac{4}{3}$ 

- 14. Find the cost of fencing a square park of side 220m at the rate of Rs.20 per metre.
- 15. Simplify

a) 
$$\frac{2}{5} + \frac{1}{3}$$
 b)  $\frac{4}{7} - \frac{2}{21}$ 

16. Find the ratio of the following a) 30 minutes to 1 hour

b) 33km to 44km c) 2m to 50cm

17. Find the sum a) 15 + 0.345 + 14.5 b) 0.23 + 11.73 + 3.5

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18. In a unit test, the following marks were obtained by 30 students. Arrange these marks in a table using tally marks.

4	4	5	5	9	7
7	9	6	3	6	1
3	8	8	3	2	6
7	1	4	7	8	5
7	4	5	4	5	6

- 19. What is the length of the wooden strip required to frame a photograph of length and breadth 32cm and 21cm respectively.
- 20. Complete the table and from the table find the solution to the equation m 3 = 5.

m	5	6	7	8	9
m – 3	-	-	-	-	-

- 21. Seema buys 2Kg rice for Rs.72. How much does she have to pay for 5Kg?
- 22. a) How many lines of symmetry does a square have?b) Draw a square and draw all the lines of symmetry for it.
- 23. Draw a line segment AB of length 8cm. Mark any point M on it. Through M, draw a perpendicular to line segment AB using ruler and compasses.

### SECTION D (Questions 24 to 28 carry 4 marks each)

- 24. Neena bought  $1\frac{2}{3}$  metre of yellow ribbon. Sita bought  $\frac{2}{3}$  metre of yellow ribbon. What is the total length of ribbon they bought?
- 25. Anu bought 8Kg fruits. Out of this, 2Kg 200g is apples, 3Kg 275g is mangoes and the rest is grapes. What is the weight of grapes?
- 26. The following table shows the number of people visiting a library on 5 days of a week. Represent the data using a bar graph. (Choose 1 unit length=5 people).

Days	Monday	Tuesday	Wednesday	Thursday	Friday
Number of people	35	20	25	45	15

On which day was the number of visitors the highest?

- 27. A floor is 5m long and 4m wide. Find the cost of carpeting the floor at the rate of Rs.60 per square metre.
- 28. Construct an angle PQR of  $120^{\circ}$  using ruler and compasses and bisect it.