

ANNUAL EXAMINATION, 2018-19

MATHEMATICS

Time : 3 hrs.

Class - VII

M.M. : 80

Date – 11.02.2019 (Monday)

Name of the student _____ Section _____

General Instructions –

- This section is divided into four sections A, B, C and D
- **Section A** comprises **6 questions** of **1 mark each**. All questions are compulsory.
- **Section B** comprises **6 questions** of **2 marks each**. All questions are compulsory.
- **Section C** comprises **12 questions** of **3 marks each**. Attempt any **10** questions.
- **Section D** comprises **9 questions** of **4 marks each**. Attempt any **8** questions.
- Draw neat diagrams wherever necessary.
- Show the required calculations in fair.

SECTION-A (Attempt all questions)

- Q.1** The rational number which is neither positive nor negative is _____.
- Q.2** 1 hectare = _____ m^2
- Q.3** Write expression for the statement: “numbers x and y both squared and added”.
- Q.4** Express $a \times a \times a \times b \times b \times c$ in exponential form
- Q.5** Number of lines of symmetry of a scalene triangle is _____.
- Q.6** A cuboid can cast a shadow in the shape of a circle. (True / False)

SECTION - B (Attempt all questions)

- Q.7** The marks obtained by a group of students in Maths test are 85, 74, 90, 85, 39, 48, 56, 95, 80 and 78. Find range of the marks obtained.
- Q.8** Find the number whose 12 % is 60.
- Q.9** Find the difference : $7\frac{4}{5} - 4\frac{3}{7}$
- Q.10** The area of a rectangle is $120 m^2$. If the breadth of the rectangle is 30 m, find its length, also find its perimeter.
- Q.11** Express 729 using exponential notation.
- Q.12** Draw the net of a cuboid.

SECTION-C (Attempt any 10 questions)

- Q.13** Find the median and mode for the following set of data :
16, 40, 44, 16, 40, 40, 80, 17, 64, 64, 100.
- Q.14** The population of a city decreased from 25,000 to 24,500. Find the percentage decrease
- Q.15** Find four rational numbers between $\frac{-4}{5}$ and $\frac{-2}{3}$
- Q.16** Construct ΔABC in which $AB = 8$ cm, $BC = 6$ cm and $\angle B = 60^\circ$
- Q.17** A circle of radius 2 cm is cut out from a square piece of an aluminium sheet of side 6 cm. what is the area of the left over aluminium sheet
- Q.18** Simplify $6x + 5(x - 2)$ and then find the value if $x = 2$

Q.19 Compare 2.6×10^{14} and 2.5×10^{12}

Q.20 Write True or False

- a) A circle has only two lines of symmetry
- b) An isosceles triangle has only one line of symmetry
- c) The angle of rotation of an equilateral triangle is 100°

Q.21 The shapes of the shadows of some 3-D objects, when seen under the lamp of an overhead projector are given below. Identify the solid.

- a) Circle
- b) Triangle
- c) Rectangle

Q.22 I buy a T.V. for Rs 10,000 and sell it at a profit of 20 %. How much money do I get for it?

Q.23 Construct ΔPQR in which $PQ = 7$ cm, $QR = 5.5$ cm and $PR = 4$ cm

Q.24 A 3m wide path runs outside and around a rectangular park of length 125m and breadth 65 m. Find the area of the path.

SECTION-D (Attempt any 8 questions)

Q.25 The percentage of literate people in four countries in 1992 and 1995 is given below :

Country	Bangladesh	Egypt	India	Italy
Literacy rate in (%) 1992	35	50	52	85
Literacy rate in (%) 1995	40	58	60	92

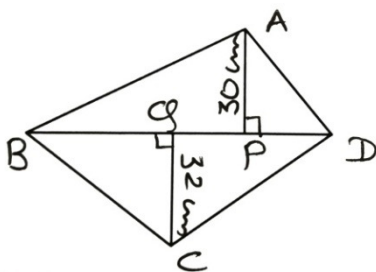
Draw a double bar graph using an appropriate scale to represent the above data.

Q.26 In what time will Rs. 1250 amount to Rs. 1375 at 2% p.a. rate of interest ?

Q.27 Arrange the following rational numbers in ascending order : $\frac{3}{5}, \frac{4}{10}, \frac{7}{15}, \frac{-5}{6}$

Q.28 Construct ΔXYZ in which $\angle X = 30^\circ, \angle Y = 60^\circ$ and $XY = 6.4$ cm

Q.29 In the figure given below the diagonal BD is 90cm, AP = 30cm and CQ = 32cm are perpendiculars to BD from points A and C respectively. Find the area of the quadrilateral ABCD.



Q.30 From the sum of $4x + 3$ and $5 - 4x + 2x^2$, subtract the sum of $3x^2 - 5x$ and $-x^2 + 2x + 5$.

Q.31 Simplify $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

Q.32 The sides of a rectangle are $3x + y$ and $7x + 2y$. Find its perimeter.

Q.33 Fill in the blanks.

Shape	Order of rotation	Angle of rotation
Square		
Regular hexagon		
Parallelogram		
rectangle		

