

Name of the Student : \_\_\_\_\_ Roll No.: 

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Name of the School : \_\_\_\_\_ Date : \_\_\_\_\_

Class : \_\_\_\_\_ Subject: Mathematics Time: 60 Min

**Instructions to the Candidate**

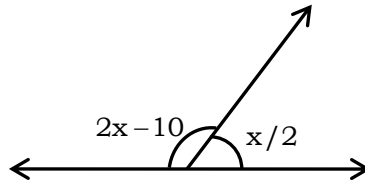
1. Each question carries 1 mark. There is no negative marking.
2. Separate Optical Mark Reader (OMR) Answer Sheet is supplied to you along with question paper booklet.
3. Read the questions carefully and fill in the circle corresponding to your answer. Fill in the circle Completely.
4. Rough work should be done only in the space provided in the Question Paper Booklet.
5. Return the OMR Answer sheet to the invigilator before leaving the examination hall.
6. You can carry the question paper with you after completing the examination.
7. Once you enter the examination hall, you are not permitted to leave till the end of the examination.

**VII Class Mathematics**

1. Population in a city was 860000. In the next year, if it is increased by 14000 more than one tenth of the previous population, the present population in the city is  
(A) 888000      (B) 960000      (C) 946000      (D) 874000
2. Which of the following is true?  
(A)  $12 \div (-1) = 12$       (B)  $-12 \div 1 = 12$   
(C)  $-12 \div (-1) = 12$       (D)  $12 \div 1 = -12$
3. The sum of two rational numbers is  $\frac{11}{27}$ . If one of them is  $\frac{-17}{27}$ . Find the other?  
(A)  $\frac{-2}{9}$       (B)  $\frac{2}{9}$       (C)  $\frac{28}{27}$       (D)  $\frac{-28}{27}$
4. Which among the following has no reciprocal?  
(A) 1      (B) -1      (C) 0      (D) None
5. Solve  $15.35 \times (100.50 - 3.75 + 903.25)$   
(A) 15350      (B) 1535      (C) 153500      (D) 0.1535

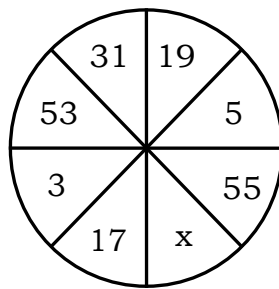
6. Arrange the following ascending order  $\frac{5}{8}, \frac{-1}{3}, \frac{-3}{5}$
- (A)  $\frac{5}{8}, \frac{-1}{3}, \frac{-3}{5}$       (B)  $\frac{-1}{3}, \frac{-3}{5}, \frac{5}{8}$       (C)  $\frac{-3}{5}, \frac{-1}{3}, \frac{5}{8}$       (D) None of these
7. The simplified value of  $\frac{\left(\frac{4}{7}\right)^5 \times \left(\frac{-2}{3}\right)^4}{\frac{4}{9} \times \left(\frac{4}{7}\right)^3}$  is
- (A)  $\frac{64}{441}$       (B)  $\frac{16}{441}$       (C)  $\frac{4}{441}$       (D)  $\frac{1}{441}$
8. A tournament had six players. Each player played every other player only once, with no ties. If Hema won 4 games, Shaili won 3 games, Shruti won 2 games, Kunal won 2 games and Laxmi won 2 games, how many games did Monica win?
- (A) 0      (B) 1      (C) 2      (D) 3
9. If  $\frac{x}{y} = \frac{6}{5}$  then  $\frac{x^2 + y^2}{x^2 - y^2} = \text{---}$
- (A)  $\frac{-36}{25}$       (B)  $\frac{36}{25}$       (C)  $\frac{61}{11}$       (D)  $\frac{-61}{11}$
10. If  $\frac{9^n \times 3^2 \times 3^n - (27)^n}{(3^3)^5 \times 2^3} = \frac{1}{27}$  find the value of n
- (A) 1      (B) 2      (C) 3      (D) 4
11. The average of five weights is 13 grams. If a 7 gram weight is added, what is the average of the six weights?
- (A) 11      (B) 12      (C) 13      (D) 114
12. The present ages of two students are in the ratio 5 : 3. After 6 years, their ages will be in the ratio 7 : 5. The present age of the first student is
- (A) 5 years      (B) 10 years      (C) 20 years      (D) 15 years
13. 'x' is the radius of a circle. If the diameter is decreased by 2 units then the perimeter of the new circle so formed is given by
- (A)  $\pi(x - 1)$  units      (B)  $\pi x$  units  
 (C)  $\pi(2x - 1)$  units      (D)  $\pi(2x - 2)$  units
14. If  $a : b = 5 : 7$  then  $3a + 5b : 5a - 2b$  is
- (A) 45 : 7      (B) 35 : 9      (C) 50 : 11      (D) 32 : 5

15. What percent of 1 day is 36 minutes?  
 (A) 2.5%                      (B) 25%                      (C) 3.6%                      (D) 0.25%
16. In the adjoining figure, if the two marked angles form a linear pair, the greater angle measures



- (A)  $142^\circ$                       (B)  $120^\circ$                       (C)  $130^\circ$                       (D)  $128\frac{1}{2}^\circ$
17. The diagonals of a rhombus measures 16 cm and 30 cm. Its perimeter is  
 (A) 68 cm                      (B) 34 cm                      (C) 36 cm                      (D) 60 cm
18. Which of the following is a Pythagorean triplet?  
 (A) 8,6,10                      (B) 8,9,10                      (C) 10,12,13                      (D) 5,3,7
19. The C.P. of 25 articles is equal to S.P. of 20 articles. The gain percentage is  
 (A) 15%                      (B) 24%                      (C) 25%                      (D) 20%
20. A sum of money lent at simple interest at 12% will double in  
 (A) 16 years                      (B) 8 years                      (C) 6 years                      (D) 10 years
21. If  $a_1 + a_2 = 1$ ,  $a_2 + a_3 = 2$ ,  $a_3 + a_4 = 3$ ,  $a_4 + a_5 = 4$ , ...  $a_{50} + a_{51} = 50$  and  $a_{51} + a_1 = 51$ , then what is the sum of  $a_1, a_2, a_3, \dots, a_{51}$ ?  
 (A) 663                      (B) 1326                      (C) 1076                      (D) 538
22. Which one of the following numbers is equal to  $\frac{2023^4 - 2022^4}{2023^2 + 2022^2}$   
 (A) 1                      (B) 2023                      (C) 2022                      (D) 4045
23. If I divide my age by 5, the remainder is 3. Your age twice mine.  
 If I divide your age by 5, the remainder will be  
 (A) 1                      (B) 2                      (C) 3                      (D) 4
24. A point comes under  
 (A) 1-dimensional                      (B) 0 – dimensional  
 (C) 2 - dimensional                      (D) 3 – dimensional
25. The ratio between circumference and diameter of a circle is given by  
 (A) 22 : 7                      (B) 7 : 22                      (C)  $\pi : 1$                       (D) Both A and C
26. The area of the largest triangle in scribed in a semicircle of radius 18 cm is  
 (A)  $82\text{ cm}^2$                       (B)  $162\text{ cm}^2$                       (C)  $324\text{ cm}^2$                       (D)  $314\text{ cm}^2$

27. The degree of a constant term is  
 (A) 1 (B) 0 (C) 2 (D) None of these
28. If  $a < b$ ,  $3^2 + 4^2 + 5^2 + 12^2 = a^2 + b^2$  is satisfied by only one pair of positive integers (a,b). what is the value of  $a + b$ ?  
 (A) 18 (B) 20 (C) 13 (D) 15
29. Two planes depart at 9 am from cities A and B located 4,500 km apart. The first plane goes from A to B. Its speed is 1,100 km/h. The second plane goes from B to A. Its speed is 900 km/h. At what time do they meet?  
 (A) 11 am (B) 11:15 am (C) 11:30 am (D) 11:45 am
30. The area of a triangular field is 1.4 hectares. If one of its sides is 350 m, then the length of the corresponding altitude is  
 (A) 80 m (B) 800 m (C) 8 m (D) 40 m
31. The value of 'x' in the given puzzle is



- (A) 29 (B) 41 (C) 23 (D) 47
32. If 16 men can do a work in 30 days, in how many days will 20 men do the same work?  
 (A) 28 days (B) 24 days (C) 30 days (D) 20 days
33. The difference between the greatest and smallest number in  $\frac{-4}{7}$ ,  $\frac{-6}{7}$ ,  $\frac{-3}{7}$  and  $\frac{-2}{7}$  is  
 (A)  $\frac{-3}{7}$  (B)  $\frac{2}{7}$  (C) 1 (D)  $\frac{4}{7}$
34. If the mean of 6, 7, 10, x, 9, 12, 11 is 8, then the value of 'x' is  
 (A) 7 (B) 1 (C) 3 (D) 12
35. A car makes 50000 revolutions to travels a distance of 121 km. The diameter of the wheel of the car is  
 (A) 55 cm (B) 66 cm (C) 88 cm (D) 77 cm
36. If  $2A = 3B$  and  $4B = 5C$  then  $A : C$ ?  
 (A) 4 : 5 (B) 8 : 15 (C) 15 : 8 (D) 3 : 4

37. A car was purchased for Rs.80,000. Its value depreciates every year by 20%. Find the value of the car at the end of 2 years.  
(A) Rs.51,600 (B) Rs.51,200  
(C) Rs.52,100 (D) Rs.52,400
38. If  $5P - \frac{3}{4} = 2P - \frac{2}{3}$  then the value of P is  
(A) 4 (B)  $\frac{1}{36}$  (C)  $\frac{1}{4}$  (D)  $\frac{1}{12}$
39. Which of the following is correct?  
(A) NCICWCQ (B) NCWCICQ (C) WCNCICQ (D) QCWCNCI
40. The value of 'a' if the value of  $-x^2 + 3x - a$  is equal to 8, when  $x = -1$  is  
(A) 12 (B) 14 (C) 15 (D) -12