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Roll No:

GENERAL INSTRUCTIONS:

- i) Each question is compulsory.
- ii) This question paper consist of three sections, Section A, B, C and D.
- iii) Each question in section A, B C and D carries 1 mark, 2 marks, 3 marks and 4 marks respectively.

Section – A

an even number.

- 1. A die is thrown once. Find the probability to get a) a number 5 b)
- 2. Find the value of A and B in the following :

A	l	В	
х		6	
В	В	В	

- 3. Factorise :  $16a^2 36b^2$
- 4. Prince purchased an electronic item for Rs. 700/- and spent Rs. 300/- on its repair. He sold it for Rs. 1400/-. Find the gain or loss percent.

## Section - B

- 5. A closed cylindrical tank is 3m high and the radius of its base circle is 7m. Find its capacity in litres. ( $\pi = 22/7$ )
- 6. One of the class intervals of a grouped frequency distribution table is 70 80.
  - a) What is upper limit of the class?
  - b) What is the class size?
- 7. Railway fare for 82 km is Rs. 164/-. Find the fare for 66 km.
- 8. Simplify and evaluate for x=1.  $x(x^2 - 2x + 1)$
- 9. Simplify the following by factorising :

$$\frac{25a^2 - 49b^2}{5a - 7b}.$$

10. A table marked at Rs. 15000/- is available for Rs. 14400/-. Find the discount and discount percentage.

Section - C

- 11. A lady bought a refrigerator for Rs. 8800/- and spent Rs. 400/- on its transportation. At what price should she sell so as to gain 12% in the whole transaction.
- 12. Calculate the amount and compound interest on Rs. 62500/- for 1<sup>1</sup>/<sub>2</sub> years at 8% per annum. Interest compounded half yearly.
- 13. A field is in the shape of a trapezium with parallel sides40m and 30m and the distance between them is 10m. Find the cost of ploughing it at the rate of Rs.  $15/m^2$ .
- 14. Factorise : a)  $x^2 + 8x + 7$ b)  $25a^2+16b^2+40ab$
- 15. Simplify: a)  $(4m+5n)^2 + (5m+4n)^2$ b)  $(ab + bc)^2 - 2ab^2c$
- 16. In 200 grams of sugar there are  $2.4 \times 10^{12}$  molecules. How many molecules are there in 1 kg of sugar?

- Std. 8
- 17. Draw a bar graph for the following frequency distribution table.

Subject	No. of Students		
Art	7		
Maths	5		
Science	6		
English	3		
Hindi	4		

- 18. 6 pipes are required to fill a tank in 1 hour 20 minutes. How long will it take if only 5 pipes of the same type are used?
- 19. Draw the graph (linear) for the following table with suitable scales on axis.

No. of Apples	1	2	3	4	5
Cost (in rupees)	5	10	15	20	25

20. Find the area of the rhombus whose side is 6 cm and altitude is 4 cm. If one of its diagonal is 8 cm find the other diagonal.

## Section - D

- 21. By selling a cooler for Rs. 6800/- a shopkeeper had a loss of 15%. For what price should he sell it to get a profit of 10%?
- 22. Using identities evaluate : a)  $103 \times 104$ b)  $95 \times 105$
- 23. Name the quadrant in which the following points lie without plotting on the graph. a) (7, -2) b) (3, 4) c) (-3, 7) d) (-4, -4)
- 24. A roller 150cm long has a diameter of 70cm takes 750 revolutions to level a playground. Find the area of the playground in m<sup>2</sup>. ( $\pi = 22/7$ )
- 25. Find the amount and compound interest on Rs. 90000/- at the rate of 10% per annum compounded annually for 3 years.
- 26. In a hostel there was a food provision for 30 students for 20 days. But due to holidays some students left and the food provision lasted for 30 days. Find the number of students left.

27. a) Add : 
$$4y(3y^2 + 5y - 7)$$
 and  $2(y^3 - 4y^2 + 5)$   
b) Subtract :  $3pq(p - q)$  from  $2pq(p+q)$ 

- 28. A farmer decided to give a rectangle plot of land to the panchayat to make a hospital for the poor. If the length of the plot is 20m more than the breadth and the perimeter is 1500m, find the length and the breadth of the plot and also calculate its area. What is the value possessed by the farmer in doing so?
- 29. Factorise : a)  $m^4 256$ b)  $y^2 - 7y + 12$
- 30. Choice of food for a group of people is given below. Draw a pie chart for this data.

Choice of Food	No. of People		
North Indian	30		
South Indian	40		
Chinese	25		
Others	25		
Total	120		

31. Weight of 35 persons are given below. Prepare a frequency distribution table taking equal class size and one of the class as 40 – 45.

43, 52, 50, 51, 47, 62, 47, 44, 48, 54, 40, 55, 50, 60, 62, 63, 53, 58, 56, 55, 40, 60, 48, 58, 56, 53, 50, 53, 42, 55, 52, 48, 46, 45, 54.