JEM FOUNDATION SCHOOLS

ANNUAL EXAMINATION

2018-19

CLASS: VIII **M.M: 80**

SUBJECT: MATHEMATICS **TIME: 3 H**

Instruction: Read the questions carefully and solve neatly and correctly. Do rough work in rough column.

SECTION - A

1x 6 = 6 marks

1. $X_1 \times Y_1 = X_2 \times Y_2$ is an example of_____

2. $a^2 - b^2$ = _____

3. $a^2 + b^2 - 2ab$ = _____

4. A Parallelogram in which each angle is a right angle is called _____

5. P (E) = _____

6. Number of diagonals in a polygon of 'n' sides _____

SECTION - B

2 x 5 = 10 marks

7. Two coins are tossed simultaneously. What are all possible outcomes?

8. Find the volume of the cuboid whose dimensions are length = 22 cm, breadth = 12 cm and height = 7.5 cm.

9. The number of members in 20 families are given below:

   4, 6, 5, 5, 4, 6, 3, 3, 5, 5, 3, 5, 4, 4, 6, 7, 3, 5, 5, 7

   Prepare a frequency distribution of the data.

10. If 16% of a number is ₹ 72, find the number.

11. Find the value of x_1 and x_2 if x and y are directly proportional.

x	3	X_1	8
y	72	120	X_2

SECTION - C

3 x 8 = 24 marks

12. Factorise: $3x^2 + 10x + 8$
13. Find the amount and compound interest on ₹ 31250 for 3 years at 8% per annum compounded annually.
14. Two adjacent angles of a parallelogram are $(2x - 4)^\circ$ and $(2x + 16)^\circ$. Find the value of 'x' and hence, find the measure of each of its angles.
15. If 45 men can do a piece of work in 49 days in how many days will 35 men do it?
16. What is the sum of all interior angles of a regular polygon of 12 sides?
17. Factorise: $25a^2 - 4b^2 + 28bc - 49\ c^2$
18. A bag contains 6 red and 8 green balls. They are mixed thoroughly and one ball is drawn at random. Find the probability of getting i) a red ball ii) a green ball
19. In an examination one requires 40% to pass. Rahul gets 185 marks and fails by 15 marks. What are the maximum marks?

SECTION D

4 x 10 = 40 marks

20. Factroise: i) $9y^2 - 12y + 4$ ii) $x^2 - x\ (a + 2b) + 2ab$
21. Find the compound interest on ₹ 125000 for 9 months at 8% per annum compounded quarterly.
22. X, Y and Z can do a piece of work in 15 days, 10 days and 12 days respectively. How long will they take to finish it if they work together?
23. A closed wooden box whose external dimensions are 62 cm, 30 cm and 18 cm. If the box is made of 2 cm thick wood. Find the volume of the wood used to make that box.
24. i) Name the parallelograms
    a) The diagonals are unequal and the adjacent sides are equal_____
    b) All the angles are equal and the adjacent sides are equal _____
    ii) The sides of a rectangle are in the ratio 5**:**4 and its perimeter is 90 cm. Find its length and breadth.
25. Draw a trapezium PQRS in which PQ // SR, PQ = 7 cm, QR = 5 cm, PS = 6**.**5 cm and $\angle Q = 60^\circ$.
26. A tap M can fill a cistern in 4 hours and the tap N can empty the full cistern in 6 hours. If both the taps are opened together in the empty cistern, in how much time will the cistern be filled up?
27. The weights (in Kg) of 35 persons are given below.

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

55, 60, 63, 58, 55, 60, 58, 53.

Prepare a frequency distribution table taking equal class size, one such class is 40 – 45 (where 45 is not included).

28. The daily earnings (in rupees) of 24 stores in a market was recorded as under.

715, 650, 685, 550, 573, 530, 610, 525, 742, 680, 736, 524, 500, 585, 723, 545, 532, 560, 580, 545, 625, 630, 645, 700.

Prepare frequency table taking equal class sizes, one such class is 500 – 550 (where 550 is not included).

30. The marks obtained by Vasu in an examination are given below.

Subject	English	Hindi	Mathematics	Science	Social Science
Marks obtained	105	75	150	120	90

Represent the above data by a pie chart.
