MODEL ACADEMY
(THE PRESTIGIOUS SCHOOL OF MIER)

Class: 8th	**Session Ending Exam 2019-20**	**Time: 2hr 30 min**
Subject: Math	**Sample Paper**	**Max. Marks: 80**

Q1. Fill in the blanks**:**   **(20*1= 20)**
1. Range of 1,2,3,1,2,3_____
2. Percentage Decrease =_____
3. Simplest form of 48:12 =_____
4. The probability of any event within the sample space is between ____ and _____.
5. Volume of right circular cylinder=_____
6. A _____ is a solid shape with flat polygonal faces.
7. Profit%=_____
8. Terms in an expression which have the same literal factors are called _____ terms.
9. The _____ in the map states what the symbols mean.
10. Area of rectangle =_____

Q2. Very short answer type questions:
1. Find the reciprocal of 5^6.
2. What is the second power of 8.
3. What are the prime factors of 80.
4. Express 31,20,000 in scientific notation.
5. How many edges does a tetrahedron have?
6. Write the Euler's formula for 3D solids.
7. Twice a number is 1 less than 11. Find the number.
8. 30% of 800=_____
9. Write any two properties of rhombus.
10. 1L=_____ cm^3

Section B(Short answer type questions-1)   **(6*2=12)**

Q3. During the last 5 years the population of a town that had 12,00,000 people increased by 15 percent. What is the population of the town?

Q4.The population of a town increases at a rate of 7% every year. If the present population is 90,000, what will it be after two years?

                              Or

Convert 0.678 into percentage.

Q5. A car travels 60km in 45 minutes. Find its speed in km/hour.

Q6. How much cardboard is needed to make a cubical box of 10 cm side?

                              Or

Find the side of a square if its area is 46.24 cm^2.

Q7. Find the lateral surface area of a cylinder of radius 10cm and height 21cm.

Q8. If 4 notebooks costs Rs. 80, how much do seven notebooks cost?

Section C(Short answer type questions-11)   (8* 3= 24)

Q9. The area of the floor of a room is 67.5 sq m. Its volume is 270 m³. Find the height of the room.

Q10. In how many years will a sum double itself at the rate of 10% simple percent per annum?

                    Or

The volume of a cube is $x^3-9x^2+27x+k$ cubic units and its side is x-3 units. Find k.

Q11. If a coin is tossed three times what is the probability of getting heads all three times. Draw tree diagram.

Q12. By selling a bicycle for Rs 819, Vinay loses 9%. At what price should he sell it to make a profit of 5%?

Q13. If a sum of Rs 40,000 at compound interest of 5% p.a. amounted to Rs. 44,100, find the time for which the money was invested.

Q14. If x varies directly as 3y and x= 3 when y=4, find x when y=12.

Q16. A pillar in the shape of a cylinder has radius 21 cm and height 3 m. Find the curved surface area and volume of the pillar.

Q17. Given below are the marks obtained by 50 students. Find the average marks.

Marks	Number of students (frequency)
0-10	4
10-20	6
20-30	16
30-40	18
40-50	6
Total	50

                    or

a) Plot the points A(-4,4), B(6,-1),C(0,5),D(-5,0) in a rectangular coordinate plane.

b) Join A and B   c) Join C and D.

d) Write down the coordinated of the point of intersection of AB and CD.

Section D(Long answer type questions)   (6* 4=24)

Q18. A cylindrical roller is used to paint a rectangular dais. The length of the roller is 1.4m and its diameter is 0.7 m. If the roller rolls 50 times to cover the dais completely, find the area of the dais.

                        Or

If the weight of 35 sheets of paper is 280g , how many sheets would weight 7.2kg ?

Q19. Calculate the amount if Rs 18,000 is invested at 15% p.a. compounded annually for 3 years.

Q20. A bookshop owner purchased 100 notebooks for Rs 15 each. However, 5 notebooks had to be thrown away as a few pages were torn from them. The remaining notebooks were sold at Rs 18 each. Find the gain or loss percent.

Q21. Shreya gets Rs 1800 as gift. She spends the money in different heads as follows. Represent this data in a pie chart.

Expenses	Amount (Rs)
Books	450
Travelling	250
Entertainment	600
Eating	300
Savings	200
Total	1800

or

Following table gives the number of students studying in a school in five years. Represent the data by means of a bar graph.

Year	No. of students
2012	650
2013	700
2014	680
2015	410
2016	790

Q24. A rectangular piece of paper, 44 cm long and 16 cm broad, is rolled along its length to form a cylinder. What is the radius of the cylinder? What is its volume?

Q25. Divide and show that the divisor is the factor of the dividend.

$X^3 - 4x - 15$ by x-3

Or

Candies were bought at Rs. 8.50 per dozen and the transport cost was Rs. 0.50 per dozen. At what price per hundred must these be sold so as to gain 12%?