MODEL ACADEMY
(THE PRESTIGIOUS SCHOOL OF MIER)

Class: 7th   **Session Ending Exam 2019-20**   **Time: 2hr 30 min**
Subject: Math   **Sample Paper**   **Max. Marks: 80**

Section A   (1×5=5marks)

Q1. Fill in the blanks:

a)   Perimeter of square_____

b)   If x = 3, y=2.5 and z = 2.1, then value of $z^2(x-y)$ is _____

c)   A square has symmetry of order_____

d)   The value of $[(-4)^2]^2$ is _____

e) $(a+b)^2=$ _____

Q.2   Multiple Choice Questions: (1×5=5marks)

i)   Express 60% in decimal form.

      a)0.6   b)6.0   c)0.006 d)none

ii)   If 3m of cloth costs Rs 21, how much will 4m cost?

      a)Rs45 b)Rs18 c)Rs28 d)Rs32

iii)   List any five rational numbers between:

      a)   -2 and 0   b) -3 and -2   c) -3/4 and -2/3   d) 1/3 and 3/4

iv)   The circumference of a circle is-

      a)$2\pi r$ b) π c) 2r   d) none

v)   The decimal 0.3666….. is:

   a) terminating   b) non-terminating

   c)non-terminating, on-repeating   d) not a rational number

Q.3   Very Short Questions: (1×10=10marks)

1.   Find the area of a circle of radius 8.4cm.

2. Express $-\frac{4}{2}$ as a rational number with denominator 24

3. Show that the reciprocal of 0.13 is 7.5

4. What is the expanded form of 4^2?

5. Multiply: 18.903 × 21

6. Find the area of rectangle whose length 4cm and breadth 2.5cm.

7. Find the circumference of a circle whose radius is 7cm.

8. Convert as required: 681mm to cm and mm.

9. Add: $3x^2$, $-7x^2$,$5x^2$

10 How many lines of symmetry does a rectangle have?

Section B   **(6×2=12marks)**

1. Draw the net of cylinder.
2. Express in scientific notation:
   i)34520000   ii)90009
3. Find the area of parallelogram whose base is 8.3cm and altitude is 4.5cm.
4. Find the area of square whose side is 6.8m.
5. The circumference of a circle is 44cm.Find its area.

   Or

   Find the circumference of a circle having radius 14cm.

6. Find the number which is 20% more than 80

   Or

   What percentage is $22\frac{1}{3}$ out of 100?

Section-C   **(8×3=24marks)**

1. If 35% of 300 apples are spoilt, find the number of good ones.

   Or

   If 145 of 1000 eggs are broken .What percentage remains?

2. The population of a town increases from 70,350 to 1,05,525 in 10 years. Find the percentage increase.

   Or

Gita scored 540 marks out of 600 in her exams. Suresh scored 440 marks out of 500.

3. Draw line segment of length 4.8cm. Construct their perpendicular bisector.
4. Determine p :
   $(-2)^5 \times (-2)^7 = (-2)^p$

   Or

   What is the area of rectangle if its length is 20cm and perimeter is 80cm.

5. Multiply and find value of each product for a=2, b= 0.5 and c=0.1
   i)$32a^2(1-2a)$ ii)$ab(a^3-b^3)$
6. A circular clock face of radius 7cm has a frame of width 7mm around it. Find the area of the frame.
7. Draw a triangle ABC, with AB=4.5cm, $< ABC$=35⁰, $< ACB$=65⁰
8. Find the rate of interest if the interest on Rs4500 for a year is Rs 540.

Section-D   **(6×4=24marks)**
1. Find the side of a parallelogram whose area is 345sq.m and the corresponding height is 23m.
2. Ritu borrows Rs20,000 at 8% p.a. for 5 years and lends it to Vishakha for 5 years at the rate of 14% p.a. Find the gain Ritu makes.

   Or

   If there is a loss of 8% on an article when sold for Rs460, what is its cost price?

3. Construct a triangle ABC with each of its sides equal to 6cm. In the triangle construct the following. What do you conclude?
   i)the bisector of $< BAC$.
   ii)the perpendicular bisector of BC.

   Or

   Construct a ΔPQR with sides 2.5cm, 3.5cm and 4cm. Construct another triangle XYZ with sides 5cm,7cm and 8cm. Measure the angles of both the triangles. What do you find?
4. The longer side of a parallelogram is 15.5cm and the corresponding altitude is 12cm. If the altitude corresponding to the shorter side is 20cm, find the length of the shorter side.
5. The mean distance of the Sun from Earth is 150million kilometres. Express this in scientific notation.
6. Simplify:
   (2y+3)(y-2) – (5y+3)(y-2)

   Or

   Simplify the following:
   $(x+a)(x-a)(x^2+a^2)$