ARCHITA EDUCENTER

CLASS-X MATHS-MOCK-TEST (SET-2)

SECTION-A   **FM:50**

MULTIPLE CHOICE QUESTIONS(1X10)= 10

1. Which of the following cannot be the probability of an event?

(a) 0.7   (b) 2/3   (c) -1.5   (d) 15%

2. If the classes of a frequency distribution are 1-10, 11-20, 21-30,…..51-60, then the size of each class is-

(a) 9   (b) 10   (c) 11   (d) 5.5

3. $(\sec^2\theta-1)$ $(1-\text{cosec}^2\theta)$ is equal to-

(a) -1   (b) 1   (c) 0   (d) 2

4. The value of 3 $\tan^2 26$degree – $3\text{cosec}^2 64$degree is-

(a) 0   (b) 3   (c) -3   (d) -1.

5. The radii of two cylinder are in the ratio 2:3 and their heights are in the ratio 5:3. The ratio of their volumes is-

(a) 10:17   (b) 20:27   (c) 17:27   (d) 20:37

6. The slope of a line parallel to the line passing through the points (0,6) and (7,3) is –

(a) 3/7   (b) -3/7   (c) 7/3   (d) -7/3

7. The 11th of the G.P. 1/8,-1/4,2,-1,…. Is-

(a) 64   (b) -64   (c) 128   (d) -128

8. If x [2/3]+y [-1/0]=[10/6], then the value of x and y are-

(a) x=2,y=6   (b) x=2,y=-6   (c) x=3,y=-4   (d) x=3,y=-6.

9. Two numbers are in the ratio 7:9. If the sum of the numbers is 288,then the smaller number is-

(a) 126   (b) 162   (c) 112   (d) 144

10. If on dividing $2x^3+ 6x^2$-(2k-7)x+5 by x+3, the remainder is k-1 then the value of k is-

(a) 2   (b) -2   (c) -3   (d) 3

SECTION-B   **3X5=15**

1. When $3x^2$-5x+p is divided by(x-2) the remainder is 3. Find the value of p. Also factorise the polynomial $3x^2$-5x +p -3.

2. The speed of a boat in still water is 11km/h. it can go 12km upstream and return downstream to the original point in 2 hours 45 minutes. Find the speed of the stream.

3. Solve the quadratic equations for x and given your answer correct to 2 decimal places:x^2+7x=7.

4. Solve the inequation: 5x-2≤3(3-x), where x ∈{-2,-1,0,1,2,3,4}. Also represent its solution on the number line.

5. Mr. Chaturvedi has a recurring deposit account in Grindlay's Bank for 4 ½ years at 11% p.a. (simple interest). If he gets Rs. 101418.75 at the time of maturity, find the monthly installment.

SECTION-C   4X5=20

1. A joker's cap is in the form of a right circular cone of base radius 7 cm and height 24cm. find the area of the cloth required to make 10 such caps.

2. The sum of the radius of base and height of a right circular cylinder is 37cm. if the total surface area of the solid cylinder is 1628sq. cm, find the volume of the cylinder.

3. Prove that:1+tanA /sin A+ 1+ cot A/cos A=2(sec A + cosec A).

4. From the top of a light house 100m high the angles of depression of two ships on opposite sides of it are 48degree and 36degree respectively. Find the distance between the two ships to the nearest metre.

5. If the mean of the following distribution is 7.5, find the missing frequency f:

Variate	5	6	7	8	9	10	11	12
frequency	20	17	f	10	8	6	7	6

SECTION-D   5X1=5

1. Using the data given below construct the cumulative frequency table and draw the ogive. From the ogive, determine the median.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	3	8	12	14	10	6	5	2