E - 8

DISTRICT COMMON EXAMINATION BOARD - E.G.D. KAKINADA

REVISION TEST - I - 2018 - 2019

MATHEMATICS

(English Medium)

Class : X] **(Max. Marks : 20)** **[Time : 1 Hr.**

(Real Numbers, Sets, Polynomials, Mensuration)

Part - A

SECTION - I **2 x 1 = 2**

Note : 1) Solve all problems.

2) Each problem carries 1 Mark.

1. Express $\log 10 + 2\log 3 - \log 2$ in single logarithm.
2. If the C.S.A. of cone is 4070 cm^2 and its diameter is 70 cm. Find the slant height of the cone.

SECTION - II **3 x 2 = 6**

Note : 1) Solve all problems.

2) Each problem carries 2 Marks.

3. Find out whether the given sets are finite or infinite.
   (i) $\{x: x \in N \text{ and } (x-1)(x-2) = 0\}$
   (ii) $\{x: x \in N \text{ and } x \text{ is a prime number}\}$
4. Find the zeroes of the polynomial $P(x) = 6x^2 - 3 - 7x$ and verify the relationship between zeroes and co-efficients.
5. Two cubes each of volume 125 cm^3 are joined end to end together. Find the total surface area of the resulting cuboid.

SECTION - III **2 x 4 = 8**

Note : 1) Solve all problems.

2) Each problem carries 4 Marks.

6. a) If $\log\left[\frac{x+y}{3}\right] = \frac{1}{2}(\log x + \log y)$ Find the value of $\frac{x}{y} + \frac{y}{x}$?

(Or)

b) If $A = \{x: x \text{ is a prime number and } x \leq 20\}$
$B = \{x: 2x+1, x \in W \text{ and } x \leq 9\}$ then find (i) $A \cup B$ (ii) $A \cap B$ (iii) $(A - B) \cap (B - A)$.

7. a) Draw the graph of the polynomial $y = x^2 - 3x - 4$ and find the zeroes using graph.

(Or)

[Turn Over

b) DWACRA is supplied cuboidal shaped was block with measure ments 88 cm x 42 cm x 35 cm from this, how many number of cylindrical candles of 2.8 cm diameter and 8 cm of height can be prepared ?

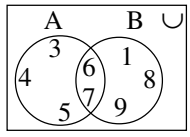
SECTION - IV

Part - B $8 \times \frac{1}{2} = 4$

Note : 1) Answer all Problems.

2) Each Problem carries $\frac{1}{2}$ mark

1. If P = {Multiples of 2}; Q ={Multiples of 3} which of the following is true ? [ ]
   A) $P \cap Q = \phi$ B) $P \subseteq Q$
   C) $P \cup Q$ = { Multiples of 6 } D) $P \cap Q$ = {Multiples of 6}
2. In the figure the value of n (B – A) = _____ [ ]
   A) 8
   B) 5
   C) 3
   D) 2



3. Co-ordinates of the polynomial $y = x^2 + 4x + 4$ which cuts the X - axis is ____ [ ]
   A) (4, 0) B) (– 2, 0) C) (– 4, 0) D) (2, 0)
4. Equation of the quadratic polynomial whose sum of zeroes and product of zeroes are –3 and 2 is ..... [ ]
   A) $x^2 + 3x + 2$ B) $x^2 – 3x + 2$
   C) $x^2 – 3x – 2$ D) $x^2 + 2x + 3$
5. If $\log_{\sqrt{a}} a = x$ then the value of x is ____ [ ]
   A) $\frac{1}{2}$ B) $\frac{3}{2}$ C) 2 D) $\frac{5}{2}$
6. If the length, height and L.S.A of a cuboid are 15 cm, 8 cm 400 cm^2 then its breadth is ____ [ ]
   A) 23 cm B) 7 cm C) 120 cm D) 10 cm
7. A cylinder and cone are having same base radius and height, then ratio of volume of cylinder and cone is _____ [ ]
   A) 1 : 2 B) 2 : 1 C) 3 : 1 D) 1 : 3
8. Which of the following is non - terminating fraction ____ [ ]
   A) $\frac{13}{625}$ B) $\frac{17}{8}$ C) $\frac{56}{35}$ D) $\frac{77}{210}$