SSC PUBLIC EXAMS – TELANGANA STATE

MODEL PAPER-3

SUB : Maths, (E/M) **Class: X** **Paper-I**

Time : 2 hours 45 min **Max. Marks : 40**

Instructions:

i) Read the following Question paper and understand every Question thoroughly without writing anything. 15 Minutes time is allotted for this.

ii) Answer all the Questions from the given "four" Section

iii) Write answers to the objective type Questions (Section-IV) on answer sheet. But at same place.

iv) In Section-III, every Question has internal choice. Answer to anyone alternative.

Section-I

I. Answer all the following Questions.

Each Questions carries 1 Mark **7x1=7**

1. Simplify $\log_9{}^{243}$?
2. $A = \{1,3,7,8\}, B = \{2,4,7,9\}$ then A∩B?
3. What about says nature of roots of x^2-x-2=0.
4. For what values of 'p' the following pair of equations has a unique solution.
   2x+py=-5; 3x+3y=-6
5. α, β are roots of ax2+bx+c=0 then Find the value $\frac{1}{\alpha}+\frac{1}{\beta}$?
6. Find the Sun of 100 natural numbers?
7. (1,-1),(0,6) and (-3,0) are vertices of triangles then Find centroid of triangle?

Section-II

II. Answer all the following Questions.

Each Questions carries 1 Mark **6x2=12**

8. Prove that 'n' is a antural number then 12^{th} no end with 0 and 5?
9. Answer the following questions.
   a. $A\{x : x^2 = 4 \text{ and } 3x = 9\}$ is null set or singleton set? Jestify your answer.
   b. $B = \{x : x \text{ is a natural number } x \angle 2017\}$ This set is finite set or intinite set? Jestify your answer.
10. Sume of roots is -6 and product of roots be 4 then find the quadratic equation?

11. For what positive value of 'p' the following pair of Linear equations have infinitely many solutions? Px+3y- (p-3)=0, 12x+py-p=0.

12. The vartices of triangle are (1,k), (4,-3) and (-9,7) and area Triangle 15 sq. units then find K value?

13. First term of A.P be 5, and 4^{th} term of A.P is 91/2 then Find 2^{nd} term and 3^{rd} term of A.P?

Section-III 4x4=16

14. A) Prove that $5-\sqrt{3}$ is an irrational number.

    B) (2.3)x=(0.23)y=100 then Find the value of $\frac{1}{x}-\frac{1}{y}$?

15. A) Draw a graph for the polynomial $p(x)=x^2+5x+6$ and find its zeros from the graphs

    B) Draw a graphical representation of Linear pair of Equation be. 3x+2y=80 and 4x+3y=110. and find its solutions?

16. A) If the geometric progressions 162,54,18……. And $\frac{2}{81},\frac{2}{27},\frac{2}{9}$ .....have their n^{th} term equal, Find the value of 'n'?

    B) Solve the given pair of equation using substitution method

    2x-y=5

    3x+2y=11

17. A) Find the area of the triangle whose lengths of sides are 15m, 17m, 21m (use Heron's Formula) and check your answer from $A=\frac{1}{2}bh$ what do you Notice?

    B) Find the co-ordinates of the point which divide the Line segmrnt joining the points (-1,7) and (4,-3) in the ratio 2:3 internally?

Section-IV 10x1/2=5

i. Choose the correct answer and write and wrkite the corresponding alphabet [A,B,C,D] in the given answer booklet.

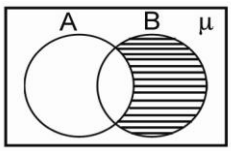
ii. Answer all questions and write them at the same place in your booklet.

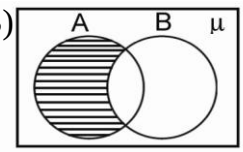
iii. Each question carries 1/2 marks

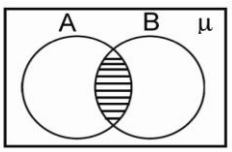
18. 5005 = …….

A) 5x7x11x13 B) 5x11x17 C) 8x7x9 D) 1x11x7

19. Which figure Represent A∩B?

A) 

B) 

C) 

D) None

20. $\log_{2015}^{1}$=_____

A) 2 B) 0 C) 1 D) 5

21. L.C.M of 12, 15 and 21 _____

A) 420 B) 240 C) 180 D) 110

22. $b^2 - 4ac \angle 0$ then nature of roots are _____

A) Real and equal B) Real and not equal C) imaginary D) None.

23. x+2y=7; 4x-3y=6 then (x,y) = _____

A) (1,4) B) (2,0) C) (8,11) D) None

24. Find the 11^{th} term from the end of the A.P 10, 7, 4,……62

A) -40 B) -23 C) -32 D) 10

25. x, x+2, and x+6 are in G.P then find the 'x' value.

A) 2 B) -4 C) 3 D) 7

26. Find the 'p' point which divide the Line segment joining points (-1,7) and (4,-3) in the ratio 2:3 internally.

A) (1,3) B) (-1,4) C) (-3,4) D) None

27. Find the radius of the circle whose centre is (3,2) and passes through (-5,6) is _____

A) $4\sqrt{5}$ units B) $5\sqrt{2}$ units C) $2\sqrt{5}$ units D) None