

S.S.C - 2025	SUMMATIVE ASSESSMENT -1	ASR
Time : 3.15Hrs	CHAPTERS – 1,2,3,4,5,6,7,13,14	100 MARKS

MODEL PAPER -1

BLUE PRINT

S.NO	TOPIC	1 M	2 M	4 M	8 M	TOTAL
1	Real numbers	1	1	1	1	15
2	Polynomials	2	1	1	1	16
3	Linear equations	1	1	1	2	23
4	Quadratic equations	1	1	1	1	15
5	Arithmetic progressions	1	1	1	1	15
6	Triangles	1	1	1	1	15
7	Coordinate geometry	1	1	1	1	15
8	Statistics	2	1	-	1	12
9	Probability	2	-	1	1	14
10	Total	12	8	8	10	100+40

SECTION -1

Answer the following questions

12 x 1 = 12m

1. Find the prime factorization of 150?
2. Assertion (A): Sum of the zeroes of $2x^2 + 3x - 4$ is $\frac{-3}{4}$ ()
Reason (R): Sum of the zeroes of $ax^2 + bx + c$ is $\frac{c}{a}$
(A) Both A and R are true and R is the correct explanation for A.
(B) Both A and R are true and R is not the correct explanation for A.
(C) A is true but R is false.
(D) A is false but R is true.
3. The general form of linear equation in two variables is
4. If n th term of AP is $a_n = 2n - 6$ then match the following . ()

1. a_2	() A). 0
2. a_3	() B). 2
3. a_4	() C). -2

A)1-B,2-C,3-A	B)1-A,2-B,3-C
C)1-C,2-A,3-B	D)1-C,2-B,3-A

5. Statement A : All similar triangles are congruent. ()

Statement B: All right angled isosceles triangles are similar.

Which of the following is true?

A)only A is true B) only B is true

C)both A and B are true D) none

6. If $P(E) = 0.05$ then $P(\text{not } E) = \dots$

7. The zero of the polynomial $3x + 2$ is ()

(A) $-2/3$ (B) $2/3$ (C) $3/2$ (D) $-3/2$

8. If $x = \frac{1}{x}$ then roots are ()

(A) 1 (B) -1 (C) both 1 and -1 (D) none

9. The distance between origin and (7,4) is ()

(A).11 (B) 3 (C). $\sqrt{65}$ (D). $\sqrt{33}$

10. In mean formula, $\frac{x_i - a}{h}$ represents

11. Which is not central tendency measurement? ()

A)Range B) Mean C) Mode D) Median

12. Which one of the following cannot be the probability of an event? ()

A)0.7 B)2/3 C)-1.5 D)4/5

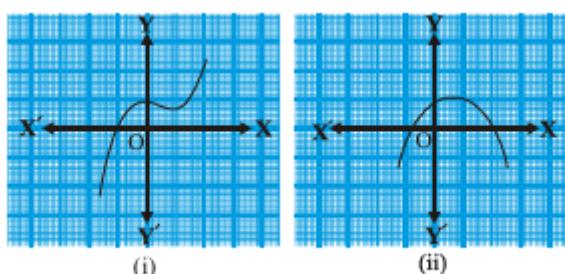
SECTION -2

Answer the following questions

8 x 2 = 16m

13. Find the HCF of 96 and 404 by the prime factorisation method. Hence, find their LCM.?

14. For each of the graphs, find the number of zeroes of $p(x)$.



15. On comparing the ratios $\frac{a_1}{a_2}$, $\frac{b_1}{b_2}$ and $\frac{c_1}{c_2}$, find out whether the lines representing the pairs of linear equations $5x - 4y + 8 = 0$ and $7x + 6y - 9 = 0$ are intersect at a point, or parallel or coincident:

16. Represent the following situations mathematically:
The product of two consecutive positive integers is 306. We need to find the integers.

17. Which term of the AP : 3, 8, 13, 18, . . . , is 78?

18. Give two different examples of pair of (i) similar figures. (ii) non-similar figures.?

19. Find the coordinates of a point A, where AB is the diameter of a circle whose centre is $(2, - 3)$ and B is $(1, 4)$.?

20. Write mode formula and explain each term in it?

SECTION - 3

Answer the following questions

$$8 \times 4 = 32\text{m}$$

SECTION - 4

Answer the following questions

5 x 8 = 40m

29. A)Prove that $\sqrt{2}$ is irrational.?

OR

B)Find the zeroes of the polynomial $p(x) = x^2 - 4x + 3$ and verify the relationship between the zeroes and coefficients?

30. A)Is it possible to design a rectangular mango grove whose length is twice its breadth, and the area is 800 m^2 ? If so, find its length and breadth.

OR

B)If the sum of first 7 terms of an AP is 49 and that of 17 terms is 289, find the sum of first n terms.

31. A)State and prove Basic Proportionality Theorem ?

OR

B)Show that the points $(1, 7)$, $(4, 2)$, $(-1, -1)$ and $(-4, 4)$ are the vertices of a square.?

32. A)If the median of the distribution given below is 28.5, find the values of x and y.

Class interval	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	Total
Frequency	5	x	20	15	y	5	60

OR

B)Two dice, one blue and one grey, are thrown at the same time. Write down all the possible outcomes. What is the probability that the sum of the two numbers appearing on the top of the dice is (i) 8? (ii) 13? (iii) less than or equal to 12?

33. A)5 pencils and 7 pens together cost 50, whereas 7 pencils and 5 pens together cost 46. Find the cost of one pencil and that of one pen. Form the pair of linear equations and find their solutions graphically.

OR

Check graphically whether the pair of equations $x + 3y = 6$ and $2x - 3y = 12$ is consistent. If so, solve them graphically ?