**SSC Model Test 2024** Subject Code: 1 2 6

Time: 25 min **Higher MathTmatics (MCQ)** Full Mark : 25

1. If the roots of equation 0 and 0 are common then
2. b. c. d.
3. Determine the x free expression from the expansion of (+ .
4. 2 b. 1240 c. 70 d. 240
5. A (k, -2), B (3,9) and C (-5, -8) are the three vertices of a triangle. If Δ= 44, then k = ?
6. 8 b. -2 c. -5 d. 3
7. What is the sum of the series 1 + +

up to infinity?

1. b. c. d.
2. If f(x) = 2x – 1 and g(x) = – 1 then what is the value of f(g(2))?
3. 6 b. 4 c. 5 d. 7
4. A symmetric coin is thrown three times. What is the probability of getting tail minimum twice?
5. b. c. d.
6. What is the domain and range of the function f(x) =
7. X < -2, y > c. -2 < x < 2, y ≥
8. -2 ≤ x ≤ 2, y < d. -x<-2 & x >2, -2<y<2
9. In ΔABC If A = , b = 2 and c = 4, then what is the value of a?
10. 2 b. 2 c. d.
11. What is the area (square unit) of the circular segment OAB?
12. 1.05 b. 2.09 c. 4.19 d. 8.38
13. In the expansion of (+ ,what is the position and the value of the term excluding x?
14. 5th, 804 b. 4th,1920 c. 6th, 252 d. 7th, 30
15. F(x) = | 2x – 6 | is an absolute value function. For what condition f(x) > 2x?
16. X < 3 b. x > 1.5 c. x < 1.5 d. x > 3
17. A number is chosen at random from three digits numbers formed by 1, 0, 2. The Probability that the number would be divisible by 10 is-
18. b. c. d.
19. Which one is correct if a > b and c < 0?
20. ac > bc b. c. ac < bc d.
21. Which one is symmetric equation?
22. - 3xy – c. + 2xy +
23. + 3xy + d. + xy +
24. Medians of a right-angled triangle are p, q, r and d is the hypotenuse, which one is right?
25. c.
26. d.
27. If 2co + 2sin=3, Then = ?
28. b. c. d.
29. In ΔABC, D and E is the midpoint of AB and AC, what is the value of
30. b. c. d.
31. If f:R→N, then what is the range of ?
32. N b. R – {1} c. R d. (1, ∞)
33. and , then find the value of ?
34. -3 b. 4 c.3 d. 6
35. From 16, What is the value of ?
36. + b. - c. + d. -
37. How many Equilateral triangle in a tetrahedron?
38. 2 b.3 c. 4 d. 5
39. What is the equation of straight-line A (-1, 3) and B (5,15)?
40. 2x = y + 5 c. y -2x + 5 = 0
41. Y = 2x + 5 d. x = 2y + 5
42. In a raffle, 30 tickets are sold and there is one prize to be won. What is the probability that someone buying 6 tickets wins the prize?
43. b. c. d.
44. What is Determiner of - 3x – 1 = 0?
45. 15 b. 16 c. 17 d. 18
46. Diagonal of a cube is 5 . Find the volume of a sphere which radius is equal to the vertex of the cube-
47. 75.24 b. 104.72 c. 98.21 d. 108.83