



Model Test

41. The value of $\frac{1-\tan^2 7.5}{1+\tan^2 7.5} =$
(1 marks)

☐ $\frac{\sqrt{3}+1}{2\sqrt{2}}$

☐ $\frac{\sqrt{3}-1}{2\sqrt{2}}$

☐ $\frac{1}{2\sqrt{2}}$

☐ $\frac{\sqrt{5}-1}{4}$

42. If $(1+x)^n = c_0 + c_1x + c_2x^2 + \dots + c_nx^n$ then the value of ${}^nc_0 + 4.{}^nc_1 + 4^2.{}^nc_2 + \dots + 4^n.{}^nc_n =$
(1 marks)

☐ 2^n

☐ 3^n

☐ 4^n

☐ 5^n

43. Number of ways in which 4 letters can be posted in 3 boxes is
(1 marks)

☐ 4^3

☐ 3×4

☐ $3! 4!$

☐ 3^4

44. One end of a diameter of the circle $x^2 + y^2 - 6x + 4y + 1 = 0$ is (2, 1). Then the co-ordinates of the other end is
(1 marks)

☐ (4, 2)

☐ (3, -6)

☐ (-2, 5)

☐ (4, -5)

45. The area included between the parabolas $y^2 = 4x$ & $x^2 = 4y$ is
(1 marks)

☐ $\frac{4}{3}$

☐ $\frac{16}{3}$

☐ $\frac{12}{7}$

☐ $\frac{5}{4}$

46. The radius of a circle is increasing at the rate 0.7 cm/sec. The rate of increase of its circumference is
(1 marks)

☐ 44 cm/sec

☐ 2.2 cm/sec

☐ 4.4 cm/sec

☐ $\frac{7}{2}cm/sec$

47. The value of $\cot^{-1}\left(\frac{ab+1}{a-b}\right) + \cot^{-1}\left(\frac{bc+1}{b-c}\right) + \cot^{-1}\left(\frac{ca+1}{c-a}\right) =$
(1 marks)

☐ $\cot^{-1}a - \cot^{-1}b - \cot^{-1}c$

☐ $2(\tan^{-1}a - \tan^{-1}b)$

☐ 1

☐ 0

48. The ratio in which the join of (1, -2, 3) and (4, 2, -1) is divided by XY-plane is
(1 marks)

☐ 2 : -3

☐ 3 : 2

☐ 4 : 1

☐ 3:1

49. The word 'stopped' has sound in the final position.
(1 marks)

☐ |d|

☐ ||d|

☐ |t|

☐ |əd|

50. The word 'selectee' has its primary stress on syllable.
(1 marks)

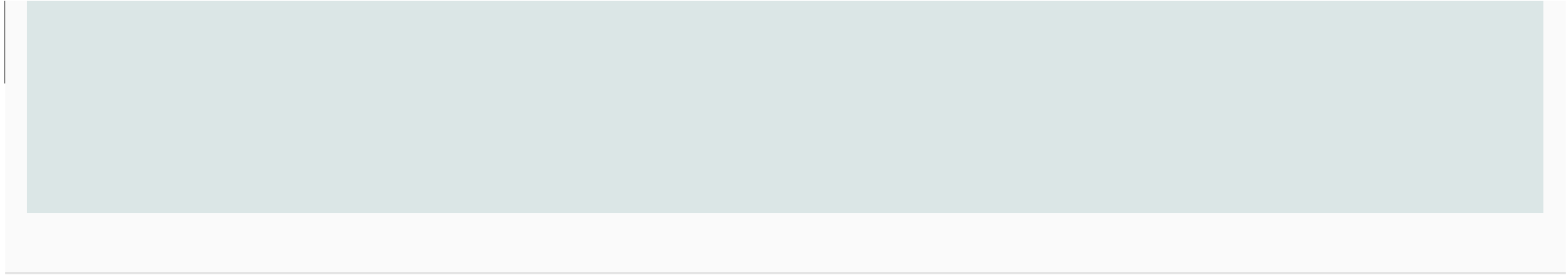
☐ 3rd

☐ 2nd

☐ 4th

☐ 1st

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