



Model Test

91. If $x + y = k$ is normal to $y^2 = 12x$ then the value of k
(2 marks)

☐ 3

☐ 9

☐ $-\frac{1}{3}$

☐ -12

92. The sides of a triangle are in A.P. then the value of $a \cos^2 \frac{C}{2} + c \cos^2 \frac{A}{2} =$
(2 marks)

☐ $\frac{a}{2}$

☐ $\frac{b}{2}$

☐ $\frac{c}{2}$

☐ $\frac{3b}{2}$

93. Six identical coins are arranged in a row. The number of ways in which number of tails is equal to number of heads is
(2 marks)

☐ $6!$

☐ $\frac{6!}{3!}$

☐ $\frac{6!}{3!3!}$

☐ $\frac{6!3!}{2!}$

94. The value of $\frac{2}{1!} + \frac{2+4}{2!} + \frac{2+4+6}{3!} + \dots \infty =$
(2 marks)

☐ e

☐ 2e

☐ 3e

☐ $\frac{e}{2}$

95. Sum to infinity of the series $1 + 3x + 5x^2 + \dots (-1 < x < 1)$ is
(2 marks)

☐ $\frac{1+x^2}{(1-x)^2}$

☐ $\frac{1-x^2}{(1+x)^2}$

☐ $\frac{2x}{(1-x)^2}$

☐ $\frac{2x}{(1+x)^2}$

96. If the pair of lines $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ intersect on y-axis, then
(2 marks)

☐ $f^2 = bc$

☐ $g^2 = ac$

☐ $f^2 + g^2 = 1$

☐ $af + bg = c$

#. Read the passage and answer the questions that follow:
Sciences engenders hope in the future of human achievement. In the study of literature and art, on the other hand, our attention is perpetually riveted upon the past; the men of Greece of the Renaissance did better than any men do now; the triumphs of former ages, so far from facilitating fresh triumphs in our age, actually increase the difficulty of fresh triumphs by rendering originality harder of attainment. Not only is artistic achievement not cumulative, but it seems even to depend upon a certain freshness ‘naivete’ of impulse and vision which civilization tends to destroy. Hence comes too those who has been nourished on the literary and artistic production of former ages, a certain peevishness and undue fastidiousness towards the present, from which there seems no escape into the deliberate vandalism which ignores tradition and in the search after originality achieves only the eccentric. But in such vandalism there is none of the simplicity and spontaneity out of which great art springs; theory is still in canker in its core, and insincerity destroys the advantages of a merely pretended ignorance.
(8 marks)

97. Science generates hope because the scientist
(2 marks)

☐ studies human achievement

☐ does not bother about past achievements

☐ works for the future

☐ studies natural phenomena

98. 'Naivete of impulse' means
(2 marks)

☐ feelings which are innocent

☐ sentiments which are childish

☐ emotions which are powerful

☐ inspiration which is pure

99. Modern literary and artistic productions are
(2 marks)

☐ Great

☐ Eccentric

☐ Traditional

☐ Original

100. Great art springs from
(2 marks)

☐ ignoring tradition

☐ pure originality

☐ acts of vandalism

☐ simplicity and spontaneity

Submit

