Mathematical and Statistical Techniques – FYBCom - SemII

1. For the function f (x) = 6 - 2x , the value of x with f(x)= 0
   (a) 0
   (b) 3
   (c) -1
   (d) 1

2. Find the present value of an immediate annunity of rupees 10,000 p.a. for 4 years at 9% p.a.

   (a) 32400

   (b) 38000

   (c) 22400

   (d) 28000

3 The difference in simple interest on a certain sum of money for 3 years and 5 years at 18% per annum is Rs. 2,160. Then the sum is_____

   (a) Rs. 4,000

   (b) Rs. 5,000

   (c) Rs. 7,000

   (d) Rs. 6,000

4 If the rate of interest is 5% p.a compounded annually what will be the value of i ?

   (a) 0.5
   (b) 0.005
   (c) 0.05
   (d) 5

5 Regression coefficient of y on x is given by

   (a) σ_x/σ_y

   (b) $r \times (\sigma_x/\sigma_y)$

   (c) σ_y/σ_x

   (d) $r \times (\sigma_y/\sigma_x)$

6. For a certain bivariate data the coefficient of Rank correlation is -0.2 while sum of the squares of differences between the ranks is 100.8 What is the number of pairs in the bivariate data.
   (a) 7
   (b) 8
   (c) 9
   (d) 10

7. Which of the following method is used to predict secular trend of a time series?

(a) Least square method
(b) Seasonal indices
(c) Moving average
(d) Index numbers

8. What is the value of Laspeyre's index number if $\sum p_0 q_0 = 680, \sum p_0 q_1 = 724, \sum p_1 q_0 = 945, \sum p_1 q_1 = 1002$
(a) 138

(b) 138.97

(c) 138.39

(d) 138.67

9. Anunbiased coin is tossed five times. What is the probability of getting 3 heads?
(a) 0.03125

(b) 0.625

(c) 0.3125

(d) 0.0625

10 For a standard normal variable z, P[z>0]=____

(a) 0

(b) 1

(c) 0.5

(d) infinity