ED-992

Bachelor of Business Administration
5th Semester Examination, March-April 2021

Paper - II

Quantitative Techniques

Time : Three Hours]   [*Maximum Marks* : 90
[*Minimum Pass Marks* : 32

Note : Answer **all** questions. All questions carry equal marks.

Unit-I

1. What do you understand by Function ? Discuss the types of Function.

OR

If 3 is added to the first number, the sum is just double of the second number and if 6 is subtracted from the second number, the remaining sum is $\frac{1}{5}$th of the first number. Find the numbers by formulating simultaneous equations.

DRG_172_(3)   *(Turn Over)*

(2)

Unit-II

2. Define and explain the derivative of a function.

OR

Find the derivative of $y = \dfrac{1}{x^3} + x^{3/2}$.

Unit-III

3. Discuss the importance of the concept of probability in statistic.

OR

In an urn there are 1 black and 2 white balls. In another there are 2 black and 1 white ball. A ball is drawn from the first and put into the second and then a ball is drawn from the second urn. Show that the chance that it is white is $\dfrac{5}{12}$.

Unit-IV

4. Explain the uses and limitations of the tests of significance.

OR

Ten individuals are chosen at random from a population and their incomes are found to be (₹) 63, 63, 64, 65, 66, 69, 69, 70, 70 and 71.

DRG_172_(3) *(Continued)*

(3)

Discuss the suggestion that the mean income in the universe is ₹ 65. Given that for a degree of freedom the values of students t-test at 5% level of significance is 2.262.

Unit-V

5. What do you understand by Linear programming ? Explain its main characteristics.

OR

Solve the following Linear programming problem graphically :

Minimize $Z = 3x + 2y$

such that $x + y \le 5$

               $3x + y \ge 6$

               $x + 4y \ge 4$

               $0 \le x \le 3$

and $0 \le y \le 3$

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