2018

COMMERCE

MCO : 104

BUSINESS STATISTICS

Full Marks : 80

Time: 3 hours

The figures in the margin indicate full marks for the questions

1. Answer the following questions: 1x12=12

i. Define mutually exclusive events.

ii. In how many ways can four books by different authors be arranged in a row in the book shelf?
A) 32 B) 24 C) 9 D) None of the one

iii. A bag contains 5 white and 7 black balls. A ball is drawn at random. What is the probability that the ball white.

iv. The ratio of the average deviation is called.....

v. The regression analysis for studying only two variables, at a time is called.....
A) Simple Regression B) Multiple Regression
C) Zero Regression D) None of these.

vi. ..... Is the relates to the study of relationship between two or more attributes.

vii. Define Lorenz Curve.

viii. The inequality in the distribution of income and wealth is observed among the members of every society or the citizens of every country. (State True or False)

ix. ..... is a control chart for variable constructed for controlling the variations in the variability of the product? It discovers assignable causes with in samples.

A) X-Chart B) R- Chart
C) P-Chart D) C-Chart

x. ..... Curve giving the probability of accepting lots of varying quality for a particular sampling plan.

xi. Student word may be used for .....

A) Z-test B) t-test
C) F-test D) All of these

xii. There is no relation between demand and supply this is a.....

A) Null Hypothesis B) Alternative Hypothesis
C) Positive Correlation D) Negative Correlation

2. Answer the following questions: 5x4=20

A. A candidate is selected for interview of management trainees for 3 companies. For the First Company there are 12 candidates, for the Second there are 15 candidates and for the Third there are 10 candidates. What is the chance of his getting selected in at least one of the companies?

B. Explain the concept of multiple regression. Cite an example from practical field where multiple regression analysis is likely to be helpful.

C. What are control charts? What are the various charts used for process control?

D. What is a statistical hypothesis? Define null and alternative hypotheses.

3. Answer the following questions (any four): 12x4=48

A. What is Probability Distribution? Explain its various approaches.

B. Explain briefly the different methods of measuring association between two attributes.

C. Define Gini coefficient in terms of Lorenz curve. Give some alternative definitions of Gini coefficient. What are the limitations of this coefficient?

D. Explain Error in hypotheses testing and level of significance.

E. In a bolt factory machines A,B & C manufacture respectively 25%, 35% & 40% of total production of their output 5%, 4% & 2% respectively are defective bolts. A bolt is drawn at random and is found to be defective. What is the probability that it is manufactured by machine?

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