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THIRD SEMESTER B.B.A. DEGREE EXAMINATION, NOVEMBER 2021 (CUCBCSS-UG)

CC15U BB3 C03/CC16U BB3 C03 - QUANTITATIVE TECHNIQUES FOR BUSINESS MANAGEMENT

(BBA – Complementary Course)

(2015 to 2018 Admissions - Supplementary/Improvement)

Time: Three Hours

Maximum: 80 Marks

Part - I

Answer *all* questions. Each question carries 1 mark.

- 1. The techniques which provide the decision maker a systematic and powerful means of analysis to explore policies for achieving predetermined goals are called ------
- 2. Analysis of variance utilizes ----- test.
- 3. Non linear correlation is also called------.
- 4. ----- is used as a test of goodness of fit.
- 5. ----- is the original hypothesis.
- 6. Accepting a null hypothesis, when it is false is called ----- error.
- 7. When the values of two variables move in the same direction, correlation is said to be -----a.

Positive b. Negative c. Linear d. Non-linear 8. An event whose occurrence is impossible, is called -----d. None of these a. Sure event b. Impossible event c. Uncertain event 9. Let 'S' denote the sample space, then $p(S) = \dots$ a. 0 b. 1 c. Infinity d. None of these 10. Mean of Binomial distribution is -----b. n+p a. np c. n/p d. npq

 $(10 \times 1 = 10 \text{ Marks})$

Part - B

Answer any *eight* questions. Each question carries 2 marks.

- 11. Define quantitative technique.
- 12. What is scatter diagram?
- 13. Define probability.
- 14. Explain linear and non linear correlation.
- 15. What do you mean by probable error?
- 16. Two coins are tossed. What is the probability of getting at least one head?
- 17. What do you mean by ANOVA?

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- 18. Define degree of freedom.
- 19. Find out the value of $8C_3$.
- 20. What is Type I and Type II error?

(8 × 2 = 16 Marks)

Part - C

Answer any *six* questions. Each question carries 4 marks.

- 21. Explain the uses of quantitative technique to businessmen.
- 22. Distinguish between correlation and regression.
- 23. What are the merits and demerits of Normal distribution?
- 24. What is hypothesis testing? Explain its steps.
- 25. You are given the following data.

X Y

Arithmetic mean 36 85

Standard deviation 11 8

Correlation coefficient between x and y = 0.66. 1) Find the regression equations

2) Estimate the value of x when y = 75.

- 26. One bag contains 4 white and 2 black balls. Another contains 3 white and 5 black balls. One ball is drawn from each bag. Find the probability that both are of same color.
- 27. Explain Bay's theorem.
- 28. In a box contains 500 apples, 50 are found to be defective. The wholesaler of the apple claims that only 6% of the apples supplied by him will be defective. Test the claim of the wholesaler.

 $(6 \times 4 = 24 \text{ Marks})$

Part - D

Answer any *two* questions. Each question carries 15 marks.

- 29. Explain the various methods of classifying quantitative techniques.
- 30. The following table gives the yield of three varieties. Preform an analysis of variance.

Varieties	Yields							
1	30	27	42					
2	51	47	37	48	42			
3	44	35	41	36				

31. Consider families with 4 children each. What percentage of families would you expect to have (1) 2 boys and 2 girls (2) at least 1 by (3) no girls and (4) at the most 2 girls.

 $(2 \times 15 = 30 \text{ Marks})$