D 41921

FOURTH SEMESTER B.Com. DEGREE EXAMINATION, APRIL 2018

(CUCBCSS - UG)

BCM 4C 04 -- QUANTITATIVE TECHNIQUES FOR BUSINESS

Time : Three Hours Maximum : 80 Marks

Part A

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

1. Two events are said to be independent if:
   (a) Each outcome has equal chance of occurrence.
   (b) There is the common point in between them.
   (c) One does not affect the occurrence of the other.
   (d) Both events have only one point.

2. If P(A) = 0.5, P(B) = 0.3 and the events A and B are independent then P(AUB) is :
   (a) 0.8. (b) 0.15.
   (c) 0.08. (d) 0.015.

3. For Bernoulli distribution with probability p of a success and q of a failure, the relation between mean the variance that hold is :
   (a) Mean < variance. (b) Mean > variance.
   (c) Mean = variance. (d) Mean <.

4. A hypothesis may be classified as :
   (a) Simple. (b) Composite.
   (c) Null. (d) All the above.

5. t-distribution ranges from :
   (a) - ∞ to 0. (b) 0 to ∞.
   (c) - ∞ to ∞. (d) 0 to 1.

6. The probability of an impossible event is _____.

7. The mean and variance are _____ in Position distribution

8. When μ = 0 and α = 1 the normal distribution is called _____.

9. When the hypothesis is false and the test accept it this is called_____.

10. The variance of a binomial distribution is 2. Its standard deviation is_____.

(10 x 1 = 10 marks)

Part B

Answer **any eight** questions (Each question carries 2 mark.)

11. What is Complementary events ?

12. What is Sampling Distribution ?

13. What is Alternative Hypothesis ?

14. What is Coefficient of Determination ?

15. What is Addition theorem on probability for mutually exclusive events ?

16. What are the uses of Probable Error ?

17. What is variance ?

18. What is zero correlation ?

19. What is standard error ?

20. What are the conditions for binomial distribution ?

(8 x 2 = 16 marks)

Part C

Answer **any six** questions (Each question carries 4 mark.)

21. What are the different methods for measuring coefficient of correlation ?

22. What are theoretical distribution ? Explain its classification

23. What is hypothesis ? What are the different types of hypothesis ?

24. Explain merits and demerits of standard deviation ?

25. The co-efficient of rank correlation of the marks obtained by 10 students in

statistics and English was 0.2. It was later discovered that the difference in ranks if one of the student was wrongly takes as 7 instead of 9. Find the correct result.

26. Two sets of candidates are competing for the position on the Board of directors of a company the probabilities that the first and second set will win are 0.6 and 0.4 respectively. If the first sets wins the probability of introducing a new product is 0.8 and the corresponding probability if the second set win is 0.3. What is the probability that the new product will be introduced ?

27. Eight coins are tossed simultaneously. Find the probability of getting at least six heads.

28. You are given the following data about advertising and sales:

	Advertisement (in Lakhs)	*Sales (in Lakhs)*
Mean	10	90
Standard deviation	3	12

The coefficient of correlation is 0.8. Calculate two regression lines.

(6 x 4 = 24 marks)

Part D

Answer **any two** questions (Each question carries 15 mark.)

29. What is correlation ? Explain the various degrees of correlation

30. A test was given to five students taken any at random from the fifth class of three schools of a town. The individual scores are :

School I	:	9	7	6	5	8
School II	:	7	4	5	4	5
School III	:	6	5	6	7	6

Carry out the analysis of variance.

31. The following table gives the result of the SSLC examination of a town held in march 1996:

Age of candidate	:	13	14	15	16	17	18	19	20	21
Percentage of failure	:	39	4	43	34	37	39	49	47	55

Calculate co-efficient of correlation and estimate probable error and standard error.

(2 x 15 = 30 marks)