C 62025

(Pages : 3) Name.....

Reg. No.....

FOURTH SEMESTER B.Com. DEGREE EXAMINATION, MAY 2014

(UG—CCSS)

Complementary Course

BC 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS

Time : Three Hours Maximum : 30 Weightage

Part A

I. Choose the correct answer. Each bunch of four questions carry equal weight of 1. Answer *all* questions :

1 The standard deviation of a standard normal :

(a) 0. (b) 1.

(c) 2. (d) 0.5.

2 The probability of sample space :

(a) 1. (b) 0.

(c) 0.5. (d) 0.33.

3 Regression analysis consists of ———— coefficients.

(a) 1. (b) 2.

(c) 3. (d) 5.

4 Scatter diagram is used in :

(a) ANOVA. (b) Z-test.

(c) Regression analysis. (d) Non-parametric test.

II. Fill in the blanks :

5 If the two regression lines are perpendicular, the correlation coefficient is ————.

6 For the comparison of two sample variance ———— test is used.

7 ———— is the distribution of rare events.

8 Probability of getting at least one head in tossing two coins is ————.

III. Answer in single word :

9 Name the error occurred when rejecting the true hypothesis.

10 A binomial variable has mean 4 and variance 2, find P ?

11 The large sample test using, which distribution.

12 Given A and B are independent events with P (A) = 1/3 and P (B) = 1/4. Find P (A ∪ B).

(12 × ¼ = 3 weightage)

Turn over

Part B

IV. Answer *all nine* questions. Each question carries a weightage of 1 :

13 Define Correlation.

14 What are properties of regression coefficients ?

15 Distinguish sample space and event.

16 Define classical probability.

17 What is meant by standard normal curve ?

18 State the procedure for testing hypothesis.

19 How to test small sample mean ?

20 State the characteristics of binomial distribution.

21 Name the classification of quantitative techniques.

(9 × 1 = 9 weightage

Part C

V. Answer any *five* questions. Each question carries a weightage of 2 :

22 Differentiate Karl Pearson's coefficient of correlation and Spearman's rank correlation.

23 A subcommittee of 6 members is to be formed out of a group consisting of 7 men and 4 women. Obtain the probability that the subcommittee will consists of (i) Exactly 2 women ; and (ii) Atleast 2 women.

24 Define conditional probability. What is the effect of independence in conditional probability

25 What is meant by a Poisson distribution ? How does it arise in practice ? Explain with suitable example.

26 The mean and variance of a binomial variable are 16 and 8. Write down the binomial density function.

27 Explain the method of testing the significance of the two large sample means.

28 Write the applications of quantitative techniques in business.

(5 × 2 = 10 weightage

Part D

VI. Answer any *two*. Each question carries a weightage of 4 :

29 From the following data form two regression lines :

X :	36	23	27	28	28	29	30	31	33	35
Y :	29	18	20	22	27	21	29	27	29	28

30 John has 15 pairs of socks on a drawer of which 5 are red, 4 are brown and 6 are white. Pairs of the same colour are indistinguishable. 2 red pair and 1 white pair are unwearable because of holes in the toe. He selects a pair of socks from drawer and note that if is red. What is the probability that it has holes in the toe ?

31 The following table gives the yield of three strains of wheat cultivated in five identical plots each. Examine whether there is any indication of strains differing in yield using ANOVA :

A :	20	21	23	16	20
B :	18	20	17	15	25
C :	25	28	22	28	32

(2 × 4 = 8 weightage)