18U365 (Pages: 2) Name: …….…………..

Reg. No. …..…………..

THIRD SEMESTER B.B.A. DEGREE EXAMINATION, NOVEMBER 2019
(CUCBCSS- UG)
CC15U BB3 C03/CC16U BB3 C03
QUANTITATIVE TECHNIQUES FOR BUSINESS MANAGEMENT
(Complementary Course)
(2015 Admission onwards)

Time: Three Hours   Maximum: 80 Marks

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

1. The probability of getting an even number when a die is thrown is …………….

2. The parameter of a Poisson distribution is …………….

3. If the amount of change of one variable bears a constant ratio with the amount of change in the other variable, the correlation is called …………….

4. A …………….is a statistical measure relating to a population.

5. Chisqare measures the difference between ……………. and expected frequency.

6. If A and B are two events, the probability of occurrence of A and B simultaneously given as:

   (a) P(A) + P(B)   (b) P(AUB)   (c) P (A∩B)   (d) P (A) P (B)

7. Area of critical region is known as:

   (a) Power of the test   (b) Size of type II error

   (c) critical value of the test statistics   (d) Size of the test

8. Analysis of Variance technique is used to test whether

   (a) Mean of several samples are equal   (b) Variances of several samples are equal

   (c) Two population means are equal   (d) Two population variances are equal

9. Regression lines are also called

   (a) Correlation graph   (b) Scatter diagram

   (c) Line of best fit   (d) None of these

10. The probability level of rejecting a true null hypothesis is called……….

    (a) Degree of freedom   (b) level of significance

    (c) Level of acceptance   (d) none of these

(10 x 1 = 10 Marks)

Part B

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

11. Define Quantitative Techniques.

12. What are mutually exclusive events and Exhaustive events?

13. Explain with examples (a) Intersection of two sets (b) Complement of a set.

14. How will you interpret the value of correlation with the probable error?

15. What is Type I and Type II error?

16. What is Chi-Square test?

17. Explain Inverse Probability

18. Explain positive and negative correlation.

19. What is test of significance?

20. What is Sign test?

(8 x 2 = 16Marks)

Part C

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

21. State the importance and various properties of Normal distribution.

22. Distinguish between correlation and regression.

23. From the following data calculate Rank Correlation coefficient.

X: 60 34 40 50 45 52 42 25 46 41 70 55

Y: 70 32 40 34 40   45 33 12 30 36 72 41

24. A bag contains 8 black and 4 white balls. If 5 balls are drawn at random, findthe chancethat three of them are black.

25. If X follows Binomial distribution with parameters n= 16 and p=2/3, determine

(a) Mean of X   (b) Variance of X

26. The monthly income of 1000 employees are normally distributed around a Mean of Rs. 2500 with a standard deviation of Rs.250. Find the number of employees whoseMonthly income would be   (a) between Rs.2000 and Rs. 3000   (b) Less than Rs.2000

27. A company manufactures certain kind of bolts. It is found that 2% of the bolts producedevery year are defective. Find the probability that out of 200 bolts produced in an year none is defective.

28. A random sample of 100 persons gave a median weight of 48 lbs with a standard deviation of 4 lbs only. Test the hypothesis at 5% level that the medianweight of the population is 60 lbs.

(6 x 4 = 24 Marks)

Part D

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

29. Explain the important areas and role of quantitative techniques in business management.

30. A college has three faculties: Arts, science and Commerce in which 40% of the studentsbelong to Arts, 50% to science, and 10% to commerce. From the results of 2003 it wasobserved that 50% of the arts students, 60% of the science students, and 20%of the commerce students passed in the examination. If a successful student is noticed, what is the probability that he was a student of Arts, Science or Commerce?

31. From the following two samples taken at random from two normal populations, Verify whether they have the same variance at 5% level or not.

Sample I	87	85	82	76	74	71	65	60		
Sample II	91	88	86	85	63	78	85	67	66	61

(2 x 15 = 30 Marks)

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