M 8700

Reg. No. : .....

Name : .....

II Semester B.B.A./B.B.A. TTM Degree (CCSS – Sup./Imp.) Examination, May 2015

Complementary Course

2 C02 BBA/BBA (T) : QUANTITATIVE TECHNIQUES FOR BUSINESS DICISIONS

(2012-13 Admn.)

Time : 3 Hours Max. Weightage : 30

PART – A

This Part consist of **two** bunches carrying **equal** weight of **one. Each** bunch consist of **4** objective type questions. Answer **all** questions.

I. 1) Original hypothesis is called
   a) alternative hypothesis b) null hypothesis
   c) composite hypothesis d) parametric hypothesis

2) ψ^2 test is a _____ test.
   a) Simple b) Parametric
   c) Nonparametric d) None

3) The mean of Binomial distribution is
   a) npq b) nq c) np d) none

4) Normal distribution is _____ distribution.
   a) Discrete b) Continuous c) Conditional d) Cumulative **(W : 1)**

II. 5) A function of sample values is called
   a) Parameter b) Statistic c) Estimation d) Testing

6) S. D. of binomial distribution is
   a) $\sqrt{npq}$ b) npq c) np d) nq

7) Z test is a _____ test.
   a) Large sample b) Small sample
   c) Composite d) None

8) Reject H_o when H_o is true is _____ error.
   a) Type I b) Type II
   c) Standard d) None **(W : 1)**

P.T.O.

PART – B

Answer **any 8** questions. **Each** question carries a weightage of **one.**

9. Define Random experiment.
10. Explain one-way classification of data.
11. Write the uses of ψ^2-test.
12. If E (x) = 1.7. Find E (3x + 5)
13. What is meant by critical region ?
14. What is meant by type I error ?
15. If A and B are mutually exclusive events and P(A) = 0.45, P(B) = 0.35, find P(A or B)
16. Define conditional probability.
17. Define Binomial distribution.
18. State Addition theorem. **(W : 8×1=8)**

PART – C

Answer **any 6** questions. **Each** question carries a weightage of **two.**

19. State and prove Addition theorem in probability.
20. Explain the steps in testing of hypothesis.
21. Write the merits and demerits of normal distribution.
22. Derive Binomial distribution.
23. A basket contains 20 bad oranges and 8 good oranges. 3 are drawn at random from this basket. Assuming Binomial distribution, find the probability that exactly 2 are good oranges.
24. A stenographer claims that she can take dictation at the rate of more than 120 words per minute. Of the 12 tests given to her she could perform an average of 135 words with a S.D. of 40. Is her claim valid at 1% level ?
    (T.V of t at 1% level = 2.718)

25. The height of school children of one institution is normally distributed with mean 54 and S.D 12 inches. What is the probability that the students having height between 46 and 56 inches ?

26. The letters of word 'STATISTICS' are written on 10 identical cards. If 2 cards are drawn at random, what is the probability that 2 'T' will occur ? **(W : 6×2=12)**

PART – D

Answer **any 2** questions. **Each** question carries a weightage of **4**.

27. Fit a Poisson distribution to the following data and find expected frequencies.

x :	0	1	2	3	4
F :	123	59	14	3	1

28. There are 2 urns one containing 5 white and 4 black balls and the other containing 6 white and 5 black balls. One urn is chosen and one ball is drawn. If it is white, what is the probability that the urn selected is the first.

29. Below are given the yield (in kg) of 3 varieties.

Varieties

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

Carry out an 'ANOVA' and conclude if there is significant difference between 3 varieties. **(W : 2×4=8)**

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