M 6538

Reg. No. : .....

Name : .....

II Semester B.B.A./B.B.A.T.T.M. Degree (CCSS-Regular/Supple./Improv.) Examination, May 2014
COMPLEMENTARY COURSE B.B.A./B.B.A. (T)
2 C02 : Quantitative Techniques for Business Decisions
(2012 Admn. onwards)

Time: 3 Hours Max. Weightage: 30

PART – A

This Part consist of **2** bunches carrying **equal** weight of **one**. **Each** bunch consist of **4** objective type questions. Answer **all** questions :

I. 1) Bay's theorem is based on _____
   a) Addition theorem
   b) Multiplication theorem
   c) Inverse probability
   d) Conditional probability

2) Population mean is denoted by _____
   a) μ b) σ c) $\bar{x}$ d) S

3) A function of sample values is called _____
   a) Parameter b) Statistic c) Estimation d) Testing

4) Z test is a _____ test.
   a) Large sample
   b) Small sample
   c) Sample
   d) None **(W=1)**

II. 5) In Binomial distribution n is _____
   a) Finite 2) Infinite c) 1000 d) None

6) Sign test is a _____ test.
   a) Parametric
   b) Non parametric
   c) Composite
   d) None

7) Standard error of sample mean is _____

a) $\sigma/\sqrt{n}$ b) σ/n c) σ^2/n d) σ^2/n^2

8) Mean of normal distribution is _____

a) μ b) σ c) $\bar{x}$ d) S **(W=1)**

PART – B

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

9. Define inverse probability.
10. What is ANOVA ?
11. Define Binomial distribution.
12. P(A) = 0.5, P(B) =0.3, P(A$\cap$B) = 0.4. Find P(A$\cup$B)
13. Define type II error.
14. Define significance level.
15. State multiplication theorem.
16. Define sample space.
17. What are the assumptions of ψ^2 test ?
18. Define null and alternative hypothesis. **(W 8×1=8)**

PART – C

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

19. State and prove addition theorem.
20. Write the importance of normal distribution.
21. Write the merits of normal distribution.
22. Write the test procedure of testing hypothesis.
23. The average life of 26 electric bulbs were found to be 1200 hours with a S.D of 150 hours. Test whether these bulbs could be considered as a random sample from a normal population with mean 1300 hours. (T.V of t at 5% level = 2.06).

24. In a town average number of accidents is 0%. Assuming that the number of accidents Follow Poisson, find the probability that there will be less than 3 accidents in a day.

25. A card is drawn from a pack of cards. What is the probability that it is
    a) a black card
    b) a king
    c) a king or a spade
    d) a spade.

26. There are 4 men and 3 women. Find the probability of selecting 3 of which
    a) exactly 2 are women
    b) at least one woman
    c) no woman. **(W 6×2=12)**

PART – D

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

27. From the following data use ψ^2 test and conclude whether innoculation is effective in preventing tuber culosis

	Attacked	**Not attacked**
Innoculated	31	469
Not innoculated	185	1315

28. The following data show the number of seeds germinating out of 5 ib damp filter for 80 sets of seeds. Fit a bionomial distribution of this data and find expected frequencies.

x :	0	1	2	3	4	5
F :	6	20	28	12	8	6

29. 3 varities of A,B,C wheat were sown in 4 plots each and the following yield in quintals/acre were obtained.

	Varities		
Plots	**A**	**B**	**C**
1	10	9	4
2	6	7	7
3	7	7	7
4	9	5	6

Set up on ANOVA and find out whether there is significant difference between varieties. **(W 2×4=8)**

BBA