

Roll No.

Department of Management
Semester End Examination
BBA 5th Semester [2019-2020]

Course Name: Quantitative Techniques for Managers
Course Code: BBA-C-17

Max Marks: 75
Time: 03:00 Hr

Instructions:

1. Attempt both Sections
2. Students are allowed to use calculator.

Section –A

[6X5=30]

Answer any six question each carry equal Marks

- 1) What do you mean by Mutually Exclusive event in probability?
- 2) One card is drawn from a standard pack of 52. What is the probability that is either a king or a queen?
- 3) Find out the area to the right of $z = 0.25$ in normal curve.
- 4) Define the concept of Marginal Analysis with example.
- 5) Determine the sample size if $\sigma = 6$, population mean is 25, sample mean is 23 and value of z is 2.576 at 99% degree of precision.
- 6) Explain the concept of point estimation with example.
- 7) What is the difference between one tailed and two tailed tests?
- 8) Explain the importance of standard deviation in large sample.
- 9) What do you mean by line simulation?

Section –B

[3X15=45]

Answer any three question each carry equal Marks

- Q1: (a) Briefly explain the concept of Binomial distribution. [10]
(b) Assuming the mean height of soldier to be 68.22 inch, with a variance of 10.8 inches. How many soldiers in a regiment of 1000 would you expect is to be over 6 feet tall? [05]
- Q2: (a) Why statistical decision theory play important role in the decision of any business? [08]
(b) Calculate EMV and EOL on the basis of given information of some probability distribution and matrix payoff on the basis of given condition. [07]

	Growth	Stable	Decline
Probability	0.1	0.6	0.3
Bond	15	3	-6
Stock	9	4	-2
Mutual Fund	3	2	1

- Q3: (a) What do you mean by random sampling and also explain its various characteristic? [05]
 (b) A sample of 500 Apples are taken at random from a large basket and 50 are found to be bad. Calculate standard Error. [05]
 (c) Explain the use of decision tree Analysis with suitable example. [05]

- Q4: (a) What are the various steps are involved in the procedure of testing hypothesis? [05]
 (b) Based on information on 1,000 random selected fields about tenancy status of the cultivation of these fields and use of fertilizers, collected in an agro-economic survey. The following classification was noted: [10]

	Owned	Rented	Total
Using Fertilizers	416	184	600
Not Using fertilizers	64	336	400
Total	480	520	1000

Would you conclude that owner cultivation are more inclined toward the use of fertilizers at 5% level? Carry out Chi-Square test as per testing procedure.

- Q5: (a) Explain the concept of Central limit theorem with example. [05]
 (b) A Car company appoints four salesmen A, B, C and D and observes their sales in three occasion - Holi, Diwali and New Year (calculate at 5% level of significance by two-way classification model). The figure in lakhs are given on the following table: [10]

Occasion/Salesman	A	B	C	D	Total
Holi	36	36	21	35	128
Diwali	28	29	31	32	120
New Year	26	28	29	29	112
Total	90	93	81	96	360

- Does the salesmen significantly differ in performance?
- Is there significant difference between the seasons?

- Q6: (a) What do you mean by correlation analysis? Explain with example. [05]
 (b) Given the following data [10]

X	6	02	10	4	8
Y	9	11	05	8	7

Find two regression equation and calculate the standard error of the estimate.