

D 33176

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Name.....

Reg. No.....

FIRST SEMESTER M.B.A. DEGREE EXAMINATION, JANUARY 2023

M.B.A. (CUCSS)

BUS 1C 07—QUANTITATIVE TECHNIQUES

Time : Three Hours

Maximum : 36 Weightage

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

1. Define Random experiment.
2. Define Population.
3. What are the differences between Questionnaire and Schedule ?
4. Differentiate between Parameter and Statistic.
5. Define Power of test.
6. Brief the advantages of SPSS.

(6 × 1 = 6 weightage)

Part B*Answer any four questions.**Each question carries 3 weightage.*

7. A bag contains 4 white, 5 red, 6 yellow balls. Find the probability of drawing (a) a white ball ; and (b) a red ball ; (c) a black ball ; and (d) a yellow ball.
8. Explain sampling and Non sampling errors.
9. A sample of size 50 has standard deviation of 10.5. Can you contradict the hypothesis that the population standard deviation 12 ?
10. Explain one tailed and two tailed tests.
11. What do you mean by single, partial, and multiple correlations.
12. Explain the Poisson distribution and Exponential distribution.

(4 × 3 = 12 weightage)

Turn over

Part C

*Answer any three questions.
Each question carries 4 weightage.*

13. In a factory, machine A and machine B are producing springs of the same type. Of this, machine A and B produce 5 % and 10 % defective springs respectively. Machine A and B produce 40 % and 60 % of the total output. One spring is selected at random and it is found defective. What is the probability that this spring was produced by machine A ?
14. Explain various sampling methods.
15. Explain the process in ANOVA.
16. The number of PCs sold from 1996 to 2002 are (in thousands) :

Year	:	1996	1997	1998	1999	2000	2001	2002
No. of PCs sold	:	51	54	59	61	63	65	67

Construct a regression equation.

17. Ranks of 8 students in English and History. Using Rank Correlation, study whether the students who are good in English are also good in History.

Student No.	:	1	2	3	4	5	6	7	8
English	:	2	8	1	7	6	4	5	3
History	:	7	3	2	6	5	8	4	1

(3 × 4 = 12 weightage)

Part D

*Answer the compulsory question.
The question carries 6 weightage.*

18. Test whether the distribution of salaries (in Lakhs) for a job at different cities are identical (level of significance is 5%) using Kruskal-Willies test :

Bangalore	:	15	20	8	12	23	6	25			
Kolkata	:	12	11	19	22	24	7	18	29		
Hyderabad	:	11	14	16	5	28	26	4	17	27	28

(1 × 6 = 6 weightage)