B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, MAY 2024

Second Semester

B.Sc Information Technology Model III

Complementary Course - MM2CMT06 - MATHEMATICS - PROBABILITY AND STATISTICS

2017 ADMISSION ONWARDS

DC2AFE09

Time: 3 Hours   Max. Marks : 80

.

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Write any two essentials of statistical units.

2. What do you mean by schedule?

3. State two reasons for the distruct of statistics.

4. What are objectives of tabulation?

5. Simply explain pie diagram.

6. What are the uses of ogive curves?

7. What are the merits of mode?

8. Define standard deviation.

9. What is classical definition of probability?

10. What is Rank Correlation?

11. If r = 0.89, P E = 0.023 find value of n.

12. Define free hand curve method.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Explain superiority of sampling over census method of data collection.

14. What are factors which decide selection of a sampling technique?

15. Draw a histogram to the following frequency distribution showing the ages of people Age: 10-15 15-20 20-30 30-40 40-50 50-75 75-100 Frequency: 4 12 20 18 14 25 10.

16. Draw a frequency polygon to the following frequency distributions Marks: 10-20 20-30 30-40 40-50 50-60 60-70 No: of students: 5 8 15 20 12 7.

17. Find Arithmetic Mean Marks Frequency Less than 10 5 less than 20 17 less than 30 31 less than 40 41 less than 50 49.

18. Find range and coefficient of range Marks : 10-20 20-30 30-40 40-50 50-60 Students : 5 10 12 8 4.

19. Find Quartile Deviation for the following values: 28, 32,25,42,55,82,10,25,40,38,39.

20. Explain two merits and demerits of scatter diagram.

21. Calculate coefficient of concurrent deviation from the following data:

X:	20	25	30	15	28	32	35	17	29
Y:	30	18	25	10	30	25	15	30	27

(6×5=30)

Part C

Answer any two questions.

Each question carries 15 marks.

22. Explain the criteria for choosing sampling method.

23. How are bar diagram classified? Explain each with an example.

24. Calculate mean and standard deviation and coefficient of variation of the grades obtained by 20 students.

62,85,73,81,74,58,66,72,54,84,65,50,80,86,71,75,83,62,85,52.

25. From the following results, estimate yield of crops when the rainfall is 22 cms and the rainfall when the yield is 600 kgs.

	Yield in Kgs(Y)	Rainfall in cms(X)
Mean	508.4	26.7
S.D	36.8	4.6

Coefficient of correlation between yield and rainfall is 0.52

(2×15=30)