M.Sc. DEGREE EXAMINATION,APRIL 2020
II Year IV Semester
Clinical Trials and Data Mining

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Define clinical trials.
2. What do you mean by response variables?
3. Define randomized control study.
4. What are the methods of randomization?
5. Give the advantages of single blind trials.
6. Define interclass correlation coefficient in cluster randomization.
7. Write the terminologies used in clinical research.
8. Write any two importance of clinical data mining.
9. Give any two measures for accuracy of classifiers.
10. Define decision tree classifier.
11. What is association analysis in data mining?
12. Write any two methods of solving cluster analysis.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Discuss the need of clinical trials.
14. Describe briefly about different phases of clinical trials.
15. Give a brief note on Adaptive randomization and unequal randomization.
16. Determine the trial size for dichotomous and continuous response variables.
17. Explain the approach for solving a classification problem.
18. Elaborate on Nearest Neighbour classifier.
19. Explain Genetic algorithm in cluster analysis.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Explain the criteria for selection of patients and treatment schedule.
21. Describe in detail about cross-over design, group allocation design and hybrid design.
22. Elaborate on Interim analysis, case report form design and database design of data management.
23. Explain on decision tree classifiers and Rule based classifiers.
24. Explain Association rule-support and confidence-rule mining problem.

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