

Roll No.

Total No. of Pages : 01

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M.Tech. (CSE) (Sem.-1)

MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE

Subject Code : MTCS/101/18

M.Code : 75153

Date of Examination : 12-06-2024

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWELVE marks.

1. Explain with help of an example the concept of Markovchains and Probabilistic inequalities.
2. Define density. Discuss cumulative distribution functions and conditional expectation.
3. Define sampling and its types. Discuss methods of moments and maximum likelihood.
4. Define statistical inference. Discuss multivariate statistical models in detail.
5. What is regression? Explain the problem of overfitting and underfitting.
6. Write a note on permutation and combinations with and without repetitions.
7. How data mining is used in prediction? Also, discuss about web traffic and computer security.
8. Describe the recent trends in soft computing, bioinformatics and computer vision.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.