

PG (CBCS)  
M.SC. Semester- III Examination, 2023  
COMPUTER SCIENCE  
PAPER: COS 395

(ADVANCED NETWORKING LAB AND MACHINE LEARNING LAB)  
Full Marks: 40 Time: 2 Hours

The figures in the right-hand margin indicate full marks.  
Candidates are required to give their answers in their own words as far as practicable.

**Write the answer for each unit in separate sheet**

**M1: ADVANCED NETWORKING LAB**

1. Answer any **ONE** questions:

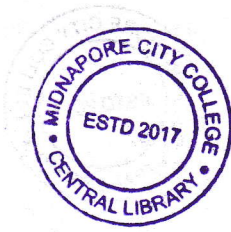
15×1=15

- a) Simulate Cyclic Redundancy Check (CRC) error detection algorithm for noisy channel.
- b) Simulate and implement stop and wait protocol for noisy channel.
- c) Simulate and implement Dijkstra algorithm for shortest path routing.
- d) Construct an echo server using TCP.
- e) Simulate and implement distance vector routing algorithm
- f) Construct an echo client using TCP.
- g) Write a program to construct a server which can broadcast a message every ten seconds.
- h) Simulate and implement go back n sliding window protocol.
- i) Simulate and implement selective repeat sliding window protocol.
- j) Write a program to construct a client which can receive messages provided by a broadcast sender.

P.N.B: 5

VIVA: 5

P.T.O

**M2: MACHINE LEARNING LAB**1. Answer any ONE questions:

15×1=15

- a) Implementing KNN Algorithm with Iris data set or any other .csv data.
- b) Implementing decision tree Algorithm with some existing or new data set in the .csv format.
- c) Implementing random forest Algorithm with some existing or new data set in .csv format.
- d) Implementing Naïve Bayes classifier Algorithm with some existing or new data set in .csv format.
- e) Implementing Neural Network classifier Algorithm with some a data set in .csv format.
- f) Implementing SVM classifier Algorithm with some data set in .csv format.
- g) Implementing Linear Regression Algorithm with some data set in .csv format.
- h) Implementing Logistic Regression Algorithm with some data set in .csv format.
- i) Implementing spam and non-spam email filtering based on any classifier
- j) Implement CNN algorithm for image classification

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