Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: Oct.2023
Faculty: Science and Technology

Program: B.Sc.Com05 **Semester: I** **SET: A**
Program (Specific): B.Sc. Computer Science
Course Type: CC
Class: S.Y.B.Sc.Com 05
Max. Marks: 35
Name of the Course: Digital Communication & Networking
Course Code: 23-ELC-232 **Time: 2Hr**
Paper: II

Instructions to the candidate:

1) *There are 4 sections in the question paper. Write each section on separate page.*
2) *All Sections are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Draw a well labelled diagram wherever necessary.*

SECTION: A

Q1) (5 Multiple Choice Question) Or Define or Explain **5**

I) Define Modulation
II) Define signal bandwidth
III) Define FSK
IV) Define noise factor
V) Define PSK

Q2) Very short answer questions (Attempt any 4/6) **4**

I) What is BPSK?
II) State one example of full duplex communication.
III) State the names of various layers of OSI Model.
IV) Give examples of networking cables.
V) Give examples of Controlled Access Protocols.
VI) Write two advantages of Spread Spectrum Technique.

SECTION: B

Q3) Short answer questions (Attempt any 2/4) 8

I) Discuss concept of pure ALOHA.
II) Explain CSMA protocol.
III) Write the names of layers of TCP/IP Protocol and explain the working of Transport layer in detail.
IV) Discuss Metropolitan Area Network with a block diagram.

SECTION: C

Q4) Short answer questions (Attempt any 4/6) 8

I) Differentiate between TDMA & FDMA.
II) Differentiate between Serial & Parallel communication.
III) State basic concept of Random Access Protocol.
IV) State two types of TDM techniques.
V) Draw diagram of ring topology.
VI) State two disadvantages of Bus topology.
VII) State the names of any four network devices.

SECTION: D

Q5) Long answer type Questions 10

Attempt any two of the following (2/4)

I) Discuss 16 QAM modulator with a neat diagram.
II) Discuss PCM modulator and demodulator with a neat diagram.
III) Explain WDM concept.
IV) Explain working of FDM demodulator circuit.