ED-473

M.Sc. 2nd Semester
Examination, May-June 2021

COMPUTER SCIENCE

Paper - II

Advanced Computer Networks

Time : Three Hours] [*Maximum Marks* : 100

Note : Answer any **two** parts from each question. All questions carry equal marks.

Unit-I

1. (*a*) Explain Data Communication and the various network elements.

(*b*) Write short notes on the following :

(*i*) Network Topologies

(*ii*) Transmission Modes

(*c*) Explain the layered architecture of OSI Reference Model.

Unit-II

2. (*a*) Explain Shannon's and Nyquist theorems for maximum data rate of a channel in detail.

(*b*) Define multiplexing. Explain the various types of multiplexing.

(*c*) Write short notes on the following :

(*i*) Parallel and Serial Transmission

(*ii*) MODEM

Unit-III

3. (*a*) Explain sliding window protocol for flow control.

(*b*) Write short notes on the following :

(*i*) Error control-ARQ stop and wait algorithms

(*ii*) The IP protocol

(*c*) Explain shorted path first algorithm for Routing.

Unit-IV

4. (*a*) Explain the concept of client and server in terms of socket addressing in Transport layer.

(*b*) Write short notes on the following :

(*i*) Domain Name System

(*ii*) Architecture and services of E-mail

(*c*) Explain in detail the concept of ATM.

Unit-V

5. (*a*) Explain the importance of security in networking.

(*b*) Explain Frame Relay Networking Technology.

(*c*) Explain Cryptography in detail.

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