

This question paper contains 3 printed pages]

ND—17—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(Revised/CBCS Pattern)

COMPUTER SCIENCE

Paper-CS-302

(Computer Networks)

(Monday, 4-12-2023)

Time : 2.00 p.m. to 5.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) Attempt all questions.

(ii) Assume suitable data, if necessary.

1. Attempt any *five* of the following :

15

- (a) What is computer network ? Explain its applications.
- (b) Explain Mesh Topology.
- (c) Discuss any *two* design issues for layers.
- (d) Explain the Packet Switching.
- (e) Explain Bridges.
- (f) Explain the concept of Parallel Transmission.
- (g) What is Pipelining ? Explain.

P.T.O.

2. Attempt any *three* of the following : 15

- (a) Distinguish between Internet and Intranet.
- (b) Explain TCP/IP Model.
- (c) Explain Gateways and Repeater.
- (d) What is Multiplexing ? Explain frequency division multiplexing.
- (e) Explain SMTP Protocol.

3. Attempt any *three* of the following : 15

- (a) Explain FTP Protocol.
- (b) Explain the concept of Asynchronous and Synchronous Transmission.
- (c) What is HUB ? Explain types of Hub.
- (d) Explain types of Network.
- (e) Draw the diagram of OSI model and explain functions of physical layer and transport layer.

4. Attempt any *three* of the following (5 marks each) : 15

- (a) Explain Connection Oriented and Connectionless Services.
- (b) Explain Internet Service Providers.
- (c) What is Switching ? Explain circuit switching.
- (d) Explain sliding window protocols.
- (e) What is a Topology ? Explain Star and Ring Topologies.

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(3)

ND—17—2023

5. Write short notes on any *three* of the following :

15

- (a) E-mail
- (b) SNMP protocol
- (c) WWW-Client side and Server side
- (d) Service Primitives
- (e) Modulation and their application.

ND—17—2023

3