CBCS SCHEME

USN | | | | | | | | | |

18MCA24

Second Semester MCA Degree Examination, Jan./Feb. 2021
Computer Networks

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What is application? Explain classes of applications of computer network. **(10 Marks)**

b. How process communicating over an abstract channel works? Explain with a diagram. **(10 Marks)**

OR

2 a. What is scalable connectivity? Explain with a neat diagram switched network. **(10 Marks)**

b. How multiplexing multiple logical flows over a single physical link with a diagram? **(10 Marks)**

Module-2

3 a. Explain with a neat diagram, Service Interface and Peer Interfaces. **(10 Marks)**

b. Which are the requirements and needs for a network? Explain. **(10 Marks)**

OR

4 a. Explain with a neat diagram of OSI-7 layer model. **(10 Marks)**

b. How high level messages are encapsulated inside of low-level messages? **(10 Marks)**

Module-3

5 a. Explain with a neat diagram of network with two autonomous systems. **(10 Marks)**

b. Briefly explain dynamic host configuration protocol. **(10 Marks)**

OR

6 a. Explain with a neat diagram forwarding packets from a correspondent node to a mobile node. **(10 Marks)**

b. Explain the concept of 3 ways of handle headers in source routing. **(10 Marks)**

Module-4

7 a. Explain with a neat diagram of UDP message queue. **(10 Marks)**

b. How TCP manages a byte stream? Explain. **(10 Marks)**

OR

8 a. Explain with a neat diagram TCP state transition. **(10 Marks)**

b. Explain relationship between TCP send buffer. **(10 Marks)**

Module-5

9 a. Explain symmetric key encryption and decryption. **(10 Marks)**

b. Explain authentication using public keys. **(10 Marks)**

OR

10 a. Explain sequence of mail gateways to store and forward email messages. **(10 Marks)**

b. Explain domain hierarchy with an example. **(10 Marks)**

* * * * *