

1543

B.C.A. Part-III Examination – 2024

303/333

(Faculty of Science)

(Three Year Scheme of 10+2+3 Pattern)

Networking Technologies

Time Allowed: Three Hours

Maximum Marks: 100

Answer of all the questions (short answer as well as descriptive) are to be given in the main answer-book only. Answer of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before start writing answers of questions.

Question paper consists of three parts.

All three parts are compulsory.

PART-I: (Very short answer) consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.

PART-II: (Short answer) consists of 5 questions of 4 marks each. Maximum limit for each question is up to 80 words.

PART-III: (Long answer) consists of 5 questions of 12 marks each with one question from each unit with internal choice.

PART-I

1. Attempt all questions. Each question carries 2 marks. [10×2=20]
- (a) What is Protocol?
 - (b) What are the key design issues of a Computer Network?
 - (c) What is Routing?
 - (d) What do you understand by Bandwidth?
 - (e) Explain FTP?
 - (f) Define Telnet.
 - (g) What do you understand by x.25?
 - (h) Define Multiplexing.
 - (i) Explain Microwave Communication.
 - (j) Define Geosynchronous Satellites.

PART-II

2. (a) Explain mesh topology with suitable diagram. [4]
(b) Explain working of bridges. [4]
(c) Explain DNS. [4]
(d) Explain synchronous and asynchronous transmission. [4]
(e) Describe advantages of optical fiber cable. [4]

PART-III

3. Explain different transmission modes. [12]

OR

- (a) Give difference between LAN, MAN and WAN. [6]
(b) What do you understand by network topology? Explain its types in detail. [6]
4. What are the responsibilities of Data link layer and network layer in OSI Model? [12]

OR

Explain the following:

[6×2=12]

- (a) Wireless Transmission
(b) Error Correction

5. Explain different layers of TCP/IP model. [12]

OR

What is SNMP? Explain the three elements of SNMP. [12]

6. What do you understand by multiplexing? Explain different types of multiplexing. [12]

OR

Difference between Packet and Circuit switching. [12]

7. Explain SONET in detail with neat diagram. [12]

OR

What do you understand by ISDN? Explain different ISDN channels. [12]