This question paper contains 4 printed pages.

Roll No. .....

B.C.A. 303

Data Comm. & Comp. Net

303

B.C.A. Part-III EXAMINATION, 2025

(Faculty of Science)

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

Data Communication & Computer Networks

Time Allowed : Three Hours

Maximum Marks: 100

समय : तीन घंटे

अधिकतम अंक : 100

Answers of all the questions (short answer as well as descriptive) are to be given in 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 the 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. Write short answer to the following: [10×2=20]

(a) What is computer network?

(b) What is TCP/IP?

(c) What is Digital Signals?

(d) Define FDM and WDM.

(e) What is role of switch and hub in network?

(f) What is satellite?

(g) Explain packet switching.

(h) What is point to point protocol?

(i) What is VPN?

(j) What is DNS protocol?

PART-II

2. Short answer type question- [5×4=20]

(a) Types of network

(b) What is pulse code modulation?

(c) What is virtual circuit switching?

(d) What is ALOHA?

(e) HTTP protocols

PART-III

3. What is Network Architecture? Explain with example. [12]

OR

Explain OSI reference model with example.

4. Write short notes on- [12]

(a) Multiplexing Technique

(b) Digital to analog modulation

OR

What is transmission media? Explain guided media with suitable example. [12]

5. What is Network Switching Technique? Explain with suitable example.

OR

Write notes on- [12]

(a) Error detection and error correction technique

(b) Point to point protocol on internet

6. Explain access mechanism (CSMA/CD repeaters, Bridges) with example. [12]

OR

What is Routing Algorithms? Explain with example. [12]

7. What is TCP/IP protocol? Explain with example.

OR

Explain application layer protocol and DNS protocol with example.
