

19. (a) Explain distance vector routing in detail.

Or

(b) How flow control is done in data link layer? Explain.

20. (a) How are HTTP and WWW related to the internet? Explain.

Or

(b) Explain the following (i) NVT (ii) DNS

S.No. 4203

NSRGA 6

(For candidates admitted from 2003–2004 onwards)

B.C.A. DEGREE EXAMINATION, NOVEMBER 2023.

Part III – Computer Applications — Major

DATA COMMUNICATIONS AND NETWORKS

Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

1. What is the purpose of a Network Interface Card (NIC)?
2. Differentiate half and full duplex.
3. What are various types of transmission media?
4. Define frequency.
5. How does FDM combine multiple signals into one?
6. What are repeaters?
7. What are the three switching methods?
8. Define Stop and Wait protocol.

9. What is FTP?

10. Define URL.

PART B — ($5 \times 6 = 30$)

Answer ALL questions by Choosing either (a) or (b).

11. (a) Briefly explain about the categories of Networks.

Or

(b) What is network topology? Explain the different network topologies.

12. (a) What are the differences of asynchronous and synchronous transmissions?

Or

(b) Explain about the working of modem.

13. (a) How is VRC related to LRC?

Or

(b) List the steps involved in creating the checksum.

14. (a) Explain datagram and virtual circuits.

Or

(b) Write about routers and gateways.

15. (a) Why is a client program finite and server program infinite?

Or

(b) What are the relationship between CGI and dynamic documents?

PART C — ($5 \times 10 = 50$)

Answer ALL questions by Choosing either (a) or (b).

16. (a) Explain about how Internet works.

Or

(b) Explain in detail about protocols and standard.

17. (a) With a neat sketch, elucidate the functions of each layer in OSI reference model.

Or

(b) Explain analog and digital signals with a neat diagram.

18. (a) Explain about coaxial cable with a neat diagram.

Or

(b) Explain in detail on various error detection codes.