65521

Fifth Semester B.C.A. Degree Examination, March/April 2021

(CBCS Scheme)

Computer Science

Paper VII – DATA COMMUNICATION AND NETWORKS

Time : 3 Hours] *[Max. Marks : 100*

Instructions to Candidates :

1) *Answer any Ten questions from Section – A*
2) *Answer any Five questions from Section – B*
3) *Answer any Three questions from Section – C*
4) *Answer any One question from Section – D.*

SECTION – A

I. Answer any **TEN** questions. Each question carries **2** marks : **(10 × 2 = 20)**

1. Mention any four goals of computer network.

2. What do you mean by half duplex and full duplex transmission modes?

3. Mention the different types of Network Topologies.

4. Define SNR.

5. Define Line Encoding.

6. What is MODEM?

7. What is Piggy backing?

8. What is framing?

9. What are different channelization techniques?

10. What are the types of bridges?

11. Define Ethernet.

12. What is flooding?

SECTION – B

II. Answer any **FIVE** questions. Each question carries **5** marks : **(5 × 5 = 25)**

13. Explain the architecture of Telnet.

14. Explain different transmission types.

15. Compare analog and digital transmission.

16. What is multiplexing? Explain TDM.

17. Explain HDLC frame format.

18. Write a note on LLC layer.

19. Explain the difference between FDMA and CDMA.

20. Explain FDDI with frame structure.

SECTION – C

III. Answer any **THREE** questions. Each question carries **15** marks : **(3 × 15 = 45)**

21. (a) Explain different types of network topologies with a neat diagram. **(10)**

(b) Explain message switching technique. **(5)**

22. (a) Explain transmission (Guided) media in detail. **(10)**

(b) Explain CRC with an example. **(5)**

23. (a) Explain in detail FDM and WDM. **(8)**

(b) Write short notes on ALOHA protocol. **(7)**

24. (a) Explain STOP and wait ARQ with a neat diagram. **(8)**

(b) Explain GO-BACK-N ARQ. **(7)**

25. (a) Explain Bellman Ford algorithm with an example. **(8)**

(b) Explain Dijikstra's algorithm. **(7)**

SECTION – D

IV. Answer any **ONE** question. Each question carries **10** marks : **(1 × 10 = 10)**

26. Explain ISO-OSI reference model with a neat diagram.

27. Write short notes on :

(a) Congestion control

(b) ROUTERS