V Semester B.C.A. Examination, November/December 2017
(CBCS Scheme) (F+R)
(2016 – 17 & Onwards)
BCA – 501 : DATA COMMUNICATION AND NETWORKS

Time : 3 Hours
Max. Marks : 100

**Instruction**: Answer all the Sections.

**SECTION – A**

Answer **any ten** questions. **Each** question carries **two** marks. \((10 \times 2 = 20)\)

1. Define SNR.
2. What is modem?
3. What is FTP?
4. What do you mean by IP utility? Give an example.
5. What is Network Topology? List out any two network topologies.
6. Define attenuation.
7. Write any two differences between analog and digital signals.
8. What is cellular telephone network?
9. What is reservation?
10. What do you mean by centralized polling?
11. Define Ethernet.
12. What is flooding?

**SECTION – B**

Answer **any five** questions. **Each** question carries **five** marks. \((5 \times 5 = 25)\)


P.T.O.
15. What is multiplexing? Explain TDM.
16. Differentiate connectionless and connection oriented services.
17. Explain the structure of HDLC frames.
18. Illustrate CSMA.
19. Describe FDDI.
20. Write Bellman Ford Algorithm.

SECTION – C

Answer any three questions. Each question carries fifteen marks. (3x15=45)

21. a) Explain OSI reference model with a neat diagram.
    b) Illustrate polynomial code with an example.

22. a) Describe twisted pair cable.
    b) Explain SONET.

23. a) What is a bridge? Explain the various types of bridges.
    b) Explain FDMA, TDMA and CDMA.

24. a) What is digital modulation? Explain the types of digital modulation techniques.
    b) Describe selective repeat ARQ.

25. a) Illustrate the two sublayers of data link layer.
    b) Illustrate openloop congestion control.

SECTION – D

Answer any one question. Each question carries ten marks. (1x10=10)

26. Explain TCP/IP model with a neat diagram.

27. Illustrate polar line encoding scheme.