

**NEW**

**2015**

**BCA**

**4th Semester Examination**

**COMPUTER NETWORKS**

**PAPER—2205**

*Full Marks : 100*

*Time : 3 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

Answer Q. No. 1 and any four from the rest.

1. Answer any five questions : 5×2

(a) What is Bandwidth ?

(b) Write down the difference between pure aloha and slotted aloha.

*(Turn Over)*

- (c) What is throughput of a network ?
- (d) How do guided media differ from unguided media ?
- (e) Define Piggybacking and its usefulness.
- (f) Write a short note about TELNET.
- (g) What is HDLC (High level data link control) ?
2. (a) In which layer a bridge can operate ? Why bridge is called smart repeater ? 1+2
- (b) What is multiplexing ? Write down the multiplexing techniques for analog signals. 2+6
- (c) Write down the difference between FDM and TDM. 4
3. Write down the difference between (any three) : 3×5
- (i) FDM and FDMA.
- (ii) ALOHA and CSMA/CD.
- (iii) CSMA/CD and CSMA/CA.
- (iv) TCP and SCTP.
4. (a) Describe NRZ-L and NRZ-I schemes. 3+3

- (b) Draw graph of the NRZ-L scheme using following data streams, assuming that the last signal level has been positive data stream — 00110001. 3
- (c) Describe differential Manchester over Manchester schemes. Draw the two graphs over data stream is 010011. 4+2
5. (a) Write down the working principle of sliding window protocol on both send window and receive window. 3+3
- (b) Describe the different types of persistence methods in CSMA. 3×2
- (c) Show how the address 47 : 20 : 1B : 2E : 08 : EF is sent out on line. 3
6. (a) What is the difference between ethernet and token ring? 3
- (b) What is Switching? What are the advantages of switching? How many types of switching? Describe the circuit switching technique with its phases and example. 2+2+1+3+1
- (c) Write down the difference between packet switching and circuit switching. 3

7. (a) What is UDP? What is the difference between UDP and TCP/IP. 1+4
- (b) Write down the application of UDP. 3
- (c) What is Domain Name space? 1
- (d) What is URL and what are its components? 1+2
- (e) How is HTTP related to www? 3

**[Internal Assessment — 30]**

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