Total No. of Questions : 8] [*Total No. of Printed Pages : 2*

Roll No ....

IT-503 (GS)

B.E. V Semester

Examination, December 2017

Grading System (GS)

Computer Networks

Time : Three Hours

Maximum Marks : 70

Note: i) Answer any five questions out of eight.

ii) All questions carry equal marks.

1. a) Explain in detail the different design issues for the layers in the layered architecture.

   b) A noiseless 4kHz channel is sampled every 1 m sec. What is the maximum data rate?

   c) What is the difference between bitrate and band rate.

2. a) If a size of a window is 3 bits, how many packets can be sent using go back N without getting an acknowledgement. Explain your answer.

   b) Why is the data link layer in a LAN is subdivided into logical link control and medium access control sublayers? Explain.

3. a) Explain the physical properties of Ethernet 802.3 with necessary diagram of Ethernet transceiver and adaptor.

   b) Compare and contrast flow control and errors control.

4. a) Explain the operation of FDDI protocol. Highlight the differences with respect to the 802.5 token ring protocol.

   b) Explain the CSMA protocols and show channel utilization graph.

5. a) UDP is a connectionless protocol. Why does it exist? Explain this.

   b) What is leaky bucket algorithm? What are the drawbacks of this algorithm.

6. a) Discuss the design issues of network layer.

   b) Explain the various congestion control algorithms briefly.

7. a) Differentiate between Hubs, switches and bridges.

   b) Explain flow control and buffering in transport layer.

8. a) Describe the connection establishment procedure in transport layer.

   b) Write a note on the following:

   i) ALOHA

   ii) Classfull and classless addressing

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