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10MCA32

Third Semester MCA Degree Examination, Dec.2014/Jan.2015

### Computer Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Write any application of computer networks. (05 Marks)  
b. Explain the statistical multiplexing. (05 Marks)  
c. Draw the OSI network architecture. Explain the different layers of an OSI model. (10 Marks)
- 2 a. Explain CRC error detection technique with example. (10 Marks)  
b. Discuss the following encoding technique:  
i) NRZ  
ii) NRZI  
iii) Manchester (10 Marks)
- 3 a. Explain the working of the sliding window protocol. (10 Marks)  
b. Explain the frame format and transmission algorithm for Ethernet (802.3). (10 Marks)
- 4 a. What is token holding time? Discuss FDDI and RPR in detail. (10 Marks)  
b. Describe any two framing approaches with example. (10 Marks)
- 5 a. Write the properties of star topology. Explain any one spanning and forwarding approach. (10 Marks)  
b. Explain the spanning tree algorithm with example. (10 Marks)
- 6 a. Define forwarding. Write and explain the algorithm for datagram forwarding. (10 Marks)  
b. Explain in detail distance vector routing. (10 Marks)
- 7 a. Explain user datagram protocol with diagram for UDP header and UDP message queue. (10 Marks)  
b. Discuss TCP end-to-end issues. (10 Marks)
- 8 Write short notes on:  
a. HTTP  
b. Email  
c. DNS  
d. STMP (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

Highly confidential document EDDC 192, @ 12-12-2014 13:05:59