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**Third Semester MCA Degree Examination, Dec.2013/Jan.2014**

**Computer Networks**

Max. Marks:100

Time: 3 hrs.

**Note: Answer any FIVE full questions.**

- 1
  - a. Explain OSI network architecture with a suitable diagram. compare it with TCP/IP. (10 Marks)
  - b. Define multiplexing. Explain frequency division multiplexing. (05 Marks)
  - c. Explain the internet protocol graph. (05 Marks)
  
- 2
  - a. Encode the following using i) NRZ, ii) NRZ-I, iii) Manchester Encoding: (06 Marks)  
0110011000111 (10 Marks)
  - b. Explain SONET frame format. (04 Marks)
  - c. What do you mean by last mile links? (10 Marks)
  
- 3
  - a. Explain the concept of stop and wait protocol with diagram. (10 Marks)
  - b. Explain FDDI physical properties with its frame format. (10 Marks)
  
- 4
  - a. Explain switching source routing with three approaches. (10 Marks)
  - b. Briefly explain the spanning tree algorithm. (06 Marks)
  
- 5
  - a. What do you mean by sub netting? (08 Marks)
  - b. Explain Interdomain Routing (BGP) in detail. (06 Marks)
  - c. Explain ARP frame format. (10 Marks)
  
- 6
  - a. Explain the distance vector algorithm, with an example. (10 Marks)
  - b. Explain the IPV<sub>6</sub> Packet header with a diagram. (08 Marks)
  
- 7
  - a. Explain the concept of three way hand shake. (06 Marks)
  - b. Explain UDP header format. (06 Marks)
  - c. Explain DNS. (06 Marks)
  
- 8
 

Write short notes on the following:

  - a. wi-fi (802.11)
  - b. E-mail & WWW
  - c. VOIP
  - d. Remote login

(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.