

**Code No: 115DT****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B.Tech III Year I Semester Examinations, February/March - 2016****COMPUTER NETWORKS****(Common to CSE, IT)****Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit.

Each question carries 10 marks and may have a, b, c as sub questions.

**Part- A****(25 Marks)**

- 1.a) What is meant by protocol. [2]
- b) What is piggybacking? [3]
- c) Define bridge. [2]
- d) Describe in brief about Types of Ethernet cabling. [3]
- e) What is virtual circuit? [2]
- f) What are the issues in routing? [3]
- g) Define Tunneling. [2]
- h) List out the socket primitives for TCP. [3]
- i) Define URL. [2]
- j) List out different types of HTML Tags. [3]

**Part-B****(50 Marks)**

- 2.a) Write any four reasons for using layered protocols.
- b) Explain the functionality of each layer in OSI reference model. [5+5]

**OR**

3. Explain in brief about the design issues in the data link layer. [10]

4. Explain the functions of following devices:

- a) Hub
- b) Bridge
- c) Router
- d) Gateway

[3+2+3+2]

**OR**

- 5.a) What are the functions of medium access control layers protocol? Explain.
- b) Explain IEEE 802.3 standard for Ethernet with the help of frame format. [5+5]

- 6.a) The major problem with distance vector algorithm is 'count to infinity'. How exchange of complete path from router to destination instead of delay, helps in solving count to infinity problem.

- b) What are the advantages of adaptive routing approach over non adaptive routing? [5+5]

**OR**

7. Describe Dijkstra shortest path algorithm. Also show working of Dijkstra algorithm with the help of an example. [10]

- 8.a) Explain in brief about TCP connection establishment and Release.  
b) Describe in brief about TCP segment Header. [5+5]
- OR**
9. Explain the elements of a Transport protocol? [10]
10. What is electronic mail? Describe in brief about sending and receiving e-mail. [10]
- OR**
- 11.a) Define HTML? Discuss in brief about Common HTML Tags.  
b) What is HTTP? Describe in brief about HTTP request methods. [5+5]

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