

Code No: 127BY

**R15**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year I Semester Examinations, May/June - 2019**

**COMPUTER NETWORKS**

**(Electronics and Communication Engineering)**

**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) Write the problems encountered in OSI reference model. [2]
- b) What is the purpose of Hamming code? [3]
- c) What is repeater? [2]
- d) Define thin and thick Ethernet. [3]
- e) What is congestion control? [2]
- f) Explain briefly about flooding. [3]
- g) What is crash recovery? [2]
- h) What are the disadvantages of IPv4? [3]
- i) Give the HTTP message format. [2]
- j) What are the services offered by application layer? [3]

**Part-B**

**(50 Marks)**

- 2.a) Explain various wired transmission media.
  - b) With a neat sketch, explain TCP reference model. [5+5]
- OR**
- 3.a) Explain HDLC protocol.
  - b) Write a note on Go-Back-N protocol. [5+5]
- 4.a) Describe ALOHA protocol in detail and give its disadvantages.
  - b) Elaborate learning bridges. [5+5]
- OR**
- 5.a) Explain pure Aloha and slotted Aloha.
  - b) Explain the frame format of Ethernet. [5+5]
- 6.a) Write the concept of distance vector routing and illustrate with an example.
  - b) Describe packet switching in detail. [5+5]
- OR**
- 7.a) Compare Virtual circuit and datagram networks.
  - b) Give a brief note on approaches of congestion control. [5+5]

- 8.a) Describe packet fragmentation.  
b) Explain dynamic host configuration protocol (DHCP). [5+5]

**OR**

- 9.a) Explain about the ARP.  
b) Illustrate with an example three way hand shake protocol for connection establishment in transport layer. [5+5]

- 10.a) Describe TCP segment header.  
b) Discuss about protocols used between mail transfer agents. [5+5]

**OR**

- 11.a) Explain about DNS.  
b) Explain in detail slow-start congestion control technique in TCP. [5+5]

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