Code No: 823AE

| **R15** |

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA III Semester Examinations, August - 2017
COMPUTER NETWORKS

Time: 3hrs   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

5×5 Marks = 25

1.a)   What is Hamming code? How it is useful in computer networks?   [5]
  b)   Write the functions of MAC and LLC.   [5]
  c)   What is optimality principle in routing? Explain briefly.   [5]
  d)   Describe in detail about tunneling.   [5]
  e)   Compare TCP and UDP.   [5]

PART - B

5×10 Marks = 50

2.   Describe the layers of OSI reference model and compare it with TCP model.   [10]
                                    OR
3.a)   Explain stop and wait protocol in detail.
  b)   Explain, How flow control is achieved in data link layer?   [5+5]

4.   Explain in detail about ALOHA protocol.   [10]
                                    OR
5.a)   Describe MAC protocol operations on a token ring.
  b)   Give a note on frame formats of token ring.   [5+5]

6.a)   What is flooding and describe reliable flooding.
  b)   Describe hierarchical routing.   [5+5]
                                    OR
7.   Explain in detail about link state routing algorithm.   [10]

8.   Describe Address resolution protocol in detail.   [10]
                                    OR
9.a)   Describe dynamic host congestion protocol in detail.
  b)   Write the services of transport layer.   [5+5]

10.   Describe TCP header in detail.   [10]
                                    OR
11.   Write short notes on
       a) TELNET
       b) SMTP protocol.   [5+5]

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