

Code No: 813AR

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MCA III Semester Examinations, August - 2017

COMPUTER NETWORKS

Time: 3 Hours

Max. Marks: 60

**Note:** This question paper contains two parts A and B.  
Part A is compulsory which carries 20 marks. Answer all questions in Part A.  
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 8 marks and may have a, b, c as sub questions.

**PART - A****5 × 4 Marks = 20**

- 1.a) What is the use of data link layer? [4]
- b) Explain about pure ALOHA and slotted ALOHA. [4]
- c) What is store and forward packet switching? Explain. [4]
- d) Draw the diagram of IPv4 header. [4]
- e) Write short notes on UDP and its header. [4]

**PART - B****5 × 8 Marks = 40**

2. Explain in detail about OSI Reference model with a neat diagram. [8]  
**OR**
- 3.a) Explain about sliding window protocol. [4+4]
- b) Write short notes on evolution of internet. [4+4]
4. Discuss about collision free protocols. [8]  
**OR**
5. Explain about  
a) Classic Ethernet physical layer. [4+4]
- b) Classic Ethernet MAC sub layer protocol. [4+4]
- 6.a) What is a virtual circuit network? Explain. [4+4]
- b) Discuss about count to infinity problem. [4+4]  
**OR**
7. Explain about  
a) Distributed Bellman-Ford routing algorithm. [4+4]
- b) Admission control. [4+4]
8. Explain about  
a) Tunneling [4+4]
- b) Internetwork routing. [4+4]  
**OR**
9. Discuss about various IP Addresses. [8]
10. Explain about TCP sliding window protocol. [8]  
**OR**
11. Explain about  
a) E-mail [4+4]
- b) DNS. [4+4]