

APJ Abdul Kalam Technological University

Ernakulam II Cluster

Second Semester M.Tech Degree Examination April 2018

05CS 6004- ADVANCED COMPUTER NETWORKS

Time: 3 hrs.

Max. Marks: 60

1. a) Differentiate between analog transmission and digital transmission. List out the reasons for preferring digital transmission over analog transmission. (3Marks)
- b) What are some major advantages and disadvantages of microwave transmission? (3 Marks)
- c) Explain Manchester encoding scheme with an example. (6 Marks)
2. a) Explain With example the various operations performed on IP address? (6 Marks)
- b) In a class B subnet, the IP address of one of the hosts and the mask as given below:
IP Address: 125.34.112.66
Mask: 255.255.224.0
What is the first address (subnet address) (2 Marks)
- c) Find the subnet mask in each case: (4 Marks)
 - i. 1024 subnets in class A
 - ii. 256 subnets in class B
3. a) Explain how stream delivery service is implemented in TCP. (4 Marks)
- b) Differentiate byte number, sequence number and acknowledgement number in TCP. (6 Marks)
- c) Explain the three phases for handling congestion in TCP. (8 Marks)

OR

4. a) Explain about an SCTP association using SCTP transition diagram? (10 Marks)
- b) Discuss the general features of SCTP and compare them with those of TCP. (8 Marks)
5. a) Explain how session initiation protocol can be used for controlling communication session such as voice and video calls over IP. (9 Marks)
- a) State the difference between RTP and RTCP. (9 Marks)

OR

6. a) Discuss about DHCP. The DHCP client and server can either be on the same network or on different networks. Explain about both situations with neat diagrams. (9 Marks)
- b) Write a note on DNS messages. (9 Marks)