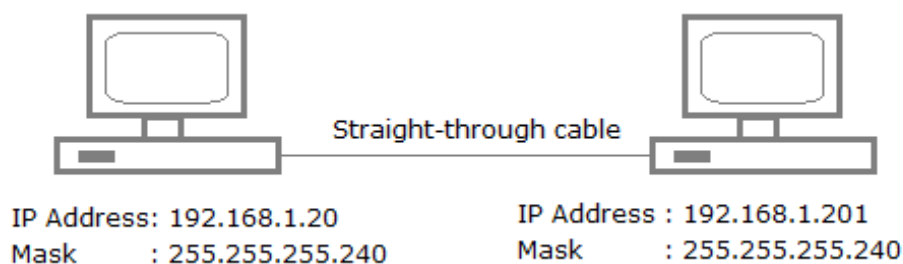APJ Abdul Kalam Technological University
Second Semester M.Tech Degree Examination May 2016
Ernakulam II Cluster

COMPUTER SCIENCE AND ENGINEERING

Specialization: COMPUTER SCIENCE AND ENGINEERING

05CS 6004 – ADVANCED COMPUTER NETWORKS

Time: 3 hrs   Max. Marks: 60

I   a)   Compare Step index multimode with graded index multimode in Optical fiber.   (3 marks)

    b)   Define antenna gain? Calculate the antenna gain if the effective area=3m^2, and carrier wavelength = 1µm.   (3 marks)

    c)   Explain Quadrature phase Shift Keying with a diagram.   (6 marks)

II a)   How many subnets does given subnet mask provide?   (3 marks)

    b)   Briefly discuss the working of ARP?   (3 marks)

    c)   Mention some characteristics of OSPF. On which algorithms OSPF depends? What is the principle behind it?   (3 marks)

    d)   A network administrator is connecting hosts A and B directly through their Ethernet Interfaces, as shown in the illustration. Ping attempts between the hosts are Unsuccessful. What can be done to provide connectivity between the hosts?   (3 marks)

Straight-through cable

IP Address: 192.168.1.20
Mask   : 255.255.255.240

IP Address : 192.168.1.201
Mask   : 255.255.255.240

III a)   Compare UDP and TCP features and Services.   (5 marks)

b) Demonstrate SCTP State Transition Diagram. (6 marks)

c) Explain how flow control mechanism is implemented in TCP with an example. (7 marks)

OR

IV a) What are the different TCP timers? (4 marks)

b) Demonstrate TCP state transition diagram. (8 marks)

c) How error control mechanism is performed in SCTP? (6 marks)

V a) Compare and contrast SMI, MIB, and SNMP. (12 marks)

b) Can we say UDP plus RTP is the same as TCP? (6 marks)

OR

VI a) State the difference between RTP and RTCP. (12 marks)

b) How Addresses are mapped to Names and vice versa in DNS? (6 Marks)