5 Years Integrated MCA, Utkal University

End Semester Examination, March 2019

Sub: Advanced Computer Network

1) Explain different scheduling algorithms to achieve QoS.   [14]

        Or

a) Differentiate between circuit switching and packet switching with diagrams. [9]

b) Write down the pros and cons of ring, bus and mesh topology. If a mesh topology has 5 nodes then how many IO ports and how many total links are required for establishment.   [5]

2)

a) Describe the functionalities of SONET.   [3]

b) Write down the algorithm of RIP.   [4]

b) An organization is granted the block 294.124.147.35/26.
[7]

i) Find the subnet mask.
ii) Find the number of addresses in the subnet.
iii) Find the first and last addresses.

                Or

a) Find the working principle of BGP with diagram.   [7]

b) An organization is granted the block 196.236.39.29/22.
        [7]

i) Find the subnet mask.
ii) Find the number of addresses in the subnet.
iii) Find the first and last addresses.

3)

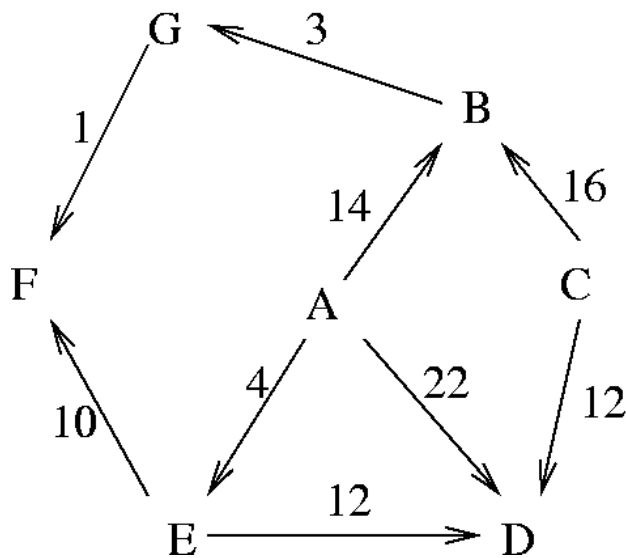a) Write short notes on any two.   [8]

i) Markov Chain

ii) Queuing Model

iii) Open loop congestion control

b) Describe single source shortest path using Djkstra algorithm by   [6]

   considering the following example where A is the source.
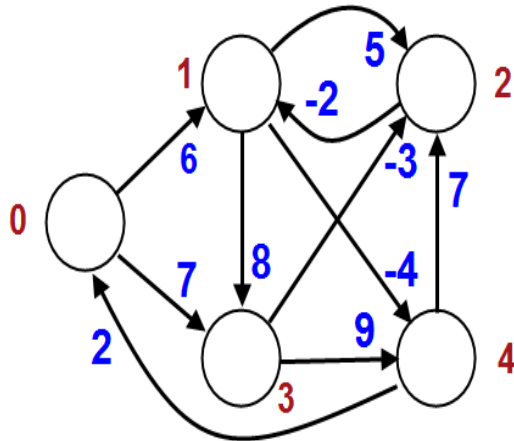

        Or

a) Differentiate the techniques of frame relay and ATM network.   [8]

b) Describe single source shortest path using Bellman ford algorithm by   [6]

considering the following example where 0 is the source.

4) a) Describe the different steps of DSR protocol with diagram.   [8]

b) Write the notes on MANET with diagram.   [6]

                    or

a) What is WTCP? Write the format of WTCP.   [7]

b) Describe MIP with diagram.   [7]

5)

Write down the different categories of cryptography. Differentiate the techniques with different keys and diagrams.   [14]

                    Or

 Write short notes on any two.   [14]

a) Digital certificate.

b) Internet telephony

c) Virtual reality over web