B.E. Sem. VII (Rev) (CMPN) Oct. 2006

Advanced Computer Networks.

[REVISED COURSE]

N/5104-06. YM-5887

(3 Hours) [Total Marks : 100

N.B. i)Solve any five questions.
ii)Figures to the right indicate full marks.
iii)Assume suitable data wherever required.

Q.1(a) What is ATM? Draw and explain cell format and header format. Also explain cell fragmentation, segmentation and reassembly in ATM. (10)

(b) Explain the functions of layers and sub-layers in ATM reference model with suitable diagram. (10)

Q.2(a) Differentiate the following (any 2): (10)

i) flow control vs. congestion control.
ii) pure ALOHA vs. slotted ALOHA.
iii) Twisted pair cables vs. fiber optic cables.

(b) Explain following approaches to flow control.
call blocking, packet discarding , packet blocking and packet scheduling. (10)

Q.3(a) What is standardization? Who standardize computer networks and its components? What is need of standardization? (10)

(b) Explain advantages and disadvantages of FDDI over token ring networks. (10)

Q.4(a) Write short notes on (any 2):

1. X.25
2. Network administration in LINUX.
3. Role of queuing theory in traffic modeling. (10)

(b) Explain frames ,devices and layers in SONET architecture in detail. (10)

Q.5(a) Compare and contrast the following: (10)

1. IPV4 and IPV6.
2. cell switching and packet switching.

(b) Explain distance vector routing in detail. (10)

Q.6(a) Explain LLC and MAC in any practical computer network. What is importance of IP and MAC addresses and port numbers in such networks. (10)

(b) Write short note on case study of LINUX operating system. (10)

Q.7 Explain various network design issues to setup a computer network connecting metro cities in India for weather forecasting. Also list assumptions, components network model etc. Draw setup of such a network. How do ensure the quality, reliability and performance of such network. (20)