Code: EC6T5

III B.Tech - II Semester – Regular/Supplementary Examinations AUGUST 2021

COMPUTER NETWORKS
(ELECTRONICS & COMMUNICATION ENGINEERING)

Duration: 3 hours   Max. Marks: 70

PART – A

Answer *all* the questions.   All questions carry equal marks

$11x \ 2 = 22 \ M$

1.

a) How would you demonstrate about LAN and WAN?

b) List out the advantages of twisted pair over coaxial cables.

c) Describe the importance of sequence numbers in stop and wait ARQ.

d) Distinguish between pure ALOHA and slotted ALOHA.

e) Describe any two congestion control methods in virtual circuit subnets.

f) Distinguish between bit stuffing and character stuffing in framing.

g) Specify the role of UDP in internet transport protocol.

h) What are the metrics used in determining the best path for a shortest path routing protocol?

i) Define the two types of user agents in the electronic mail system.

j) Write any two services network layer provides to transport layer.

k) State the advantages of Domain Name System.

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain in detail about ISO-OSI Reference Model with neat diagram.   8 M

   b) Describe the importance of physical layer. Discuss in detail about the guided transmission media available at the physical layer.   8 M

3. a) Discuss in detail about sliding window protocol using Go back N.   8 M

   b) Explain IEEE 802.3 MAC sub layer with the help of frame format.   8 M

4. a) Discuss about leaky bucket algorithm and Token bucket algorithm with neat diagram.   8 M

   b) Define Routing. Explain Distance vector routing algorithm in detail with an example and also mention its limitations.   8 M

5. a) Draw the TCP segment header and explain the various fields of TCP header in detail.   8 M

b) Discuss about flow and congestion control in TCP.   8 M

6. a) Describe the importance of Electronic Mail System services in computer networking and also explain its architecture.   8 M

b) Explain Domain Name System in detail.   8 M