2124

B.E. (Electrical and Electronics Engineering)

Fifth Semester

PC-EE-505: Computer Networks

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** *Attempt* <u>five</u> *questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I. Attempt the following:-

   a) Define the OSI model and explain the function of the transport layer.

   b) What is packet switching, and how does it differ from circuit switching?

   c) Define multiplexing and demultiplexing?

   d) Describe the function of routers in computer networks.

   e) What is the purpose of the Domain Name System (DNS)?          (5x2)

## UNIT - I

II. Briefly explain different types of transmission Medias in computer networks? (10)

III. Explain the TCP/IP model layers and how they correspond to the OSI model layers. (10)

IV. a) Discuss the Ethernet frame format.

   b) What is the need of Framing? Explain byte stuffing and bit stuffing methods of framing.          (2x5)

## UNIT - II

V. a) What is IPv6? Explain its advantages over IPV4. Also explain its frame format.

   b) Explain the selective repeat Sliding window protocol.          (2x5)

VI. a) Explain TCP and UDP.

   b) Explain any one of the dynamic routing algorithms in detail.          (2x5)

VII. Write short note on:-

   a) Switching Techniques

   b) Domain name system          (2x5)

x-x-x