ANDHRA ENGINEERING COLLEGE: ATMAKUR – 524322

CSE B.TECH III-I SEM (R23) II-MID EXAMINATIONS, OCTOBER-2025

BRANCH:**Computer Science Engineering** DATE:**18-10-2025**
SUBJECT & CODE:**COMPUTER NETWORKS&INTERNET PROTOCOLS &23A05501T** Type: DESCRIPTIVE
Max. Marks: 30 Duration:120 Mins
Name of the faculty:**OBULA RAJU D** DEPT:**CSE**

Note: This question paper contains two parts A and B.
Part A each question carries 2 marks, answer all question in part A & part B.
Part B each question carries 10 marks.
The marks obtained in part B are condensed to 15 marks.
OBJ(10M)+DES(15)+ASS(5M)=**TOT(30M)**
OBJ(10M)+DES(15)= 25M

PART-A (5x2=10)

OBJ(10M).

(a) What is Internetworking? Explain the role of routers in internetworking with a simple diagram. **(2M)**

(b) Define Datagram. How is it used in the Internet Protocol (IP)? **(2M)**
(c) What is UDP? Mention any two features of UDP. **(2M)**
(d) Define Congestion Control. Why is it necessary in networking? **(2M)**
(e) What is DNS? Explain its purpose in the Internet.**(2M)**

PART-B (10x3=30)

DES(30M)/Final (15M)

(1). Explain the concept of internetworking and describe how the network layer facilitates communication across different networks?**(10M)**

OR

(2). Discuss the role of the Internet Protocol (IP) in the network layer. How do IPv4 and IPv6 and MPLS differ, and why is IPv6 important for the future of the Internet? **(10M)**

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(3).Explain the UDP header format with its key fields. Describe the data flow in cellular networks?**(10M)**

OR

(4). Explain the TCP header format and its key fields. Describe how connection establishment occurs using the three-way handshake and how reliable data transfer is achieved using the sliding window mechanism. Support your answer with neat flow diagrams.**(10M)**

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(5).(10M)

Three10-mark questions under "Choice One (5.1,5.2,5.3)"

(5.1)(10M)(a) Explain the HTTP?**(5M)**

(b).Explain electronic mail?**(5M)**

OR

(5.2)(10M)(a). Explain the DNS (Domain Name System) as the Internet's directory service?**(5M)**

(b). Explain Video Streaming ?**(5M)**

OR

(5.3)(10M)(a) Explain example of peer-to-peer (P2P) network applications?**(5M)**

(b) Explain the Principles of Network Applications.?**(5M)**