

**B. TECH. SEM -VII (E & TC ENGG.) (2014 COURSE) (CBCS) :
SUMMER - 2018**

SUBJECT: COMPUTER NETWORKS

Day: **Monday**
Date: **21/05/2018**

S-2018-2541

Time: **02.30 PM TO 05.30 PM**
Max Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data if necessary.

Q.1 With a neat diagram explain each layer of OSI reference model? Compare TCP/IP reference model with OSI reference model? **[10]**

OR

What is circuit and packet switching in computer networks, what are delay, loss and recovery in circuit and packet switching in computer networks? State differences between circuit and packet switching in computer networks?

Q.2 Explain multi access protocol-ALOHA and Carrier sense multiple access (CSMA) and collision free protocols? State differences between repeaters, application program interface (API), Modems, Gateways? **[10]**

OR

Explain functionality and usages of bridges and what is spanning tree? Explain Ethernet, gigabit Ethernet, Ethernet MAC sub layer, data link layer switching and use of bridges?

Q.3 Explain medium access sub layer – channel allocation problem, multiple access protocol, IEEE 802 standards for local area networks (LAN) and wide area networks (WAN)? **[10]**

OR

With a neat diagram explain logic link control (LLC), Medium access control (MAC), Cyclic Redundancy Check(CRC) Codes in Data Link Layer (DLL)?

Q.4 Explain hierarchical routing, virtual circuit subnet and chock packets, resource reservation protocol? **[10]**

OR

How is congestion generated and what are congestion control algorithms, policies – Leaky Bucket Algorithm, Token Bucket Algorithm?

Q.5 What is Remote Procedure Call (RPC)? Explain real time transport protocols and Internet Transport Protocols? **[10]**

OR

Explain with neat diagram client-server model? Explain client-server applications- Electronic mail, teletype Network (TelNet), Domain Name System(DNS), Remote Login Protocol (SSH)?

Q.6 Explain Symmetric – Key Algorithms, Data Encryption Standards (DES), Advanced Encryption Standard (AES)? **[10]**

OR

Explain in detail – Public Key Algorithms, Fire wall, Management of public key?

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