Day: Thursday		Time: 02.30 PM TO 05.30 PM
Date: 09/05/2019	**S-2019-2861**	Max. Marks: 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks
3) Draw neat diagram **WHEREVER** necessary.
4) Assume suitable data, if necessary.

Q.1 What is circuit and packet switching in computer network? What is delay, **(10)** loss and recovery in circuit and packet switching networks? State difference between circuit and packet switching network.

OR

With a neat diagram explain each layer of OSI reference model? Compare **(10)** TCP / IP reference model with OSI reference model.

Q. 2 Explain with a neat diagram guided transmission and unguided **(10)** transmission media.

OR

What is EIA 232D interface standard, explain different EIA's and their **(10)** advantages and disadvantages?

Q. 3 Explain medium access sub – layer channel allocation problem, multiple **(10)** access protocols IEEE 802 standards for LANs and WANs.

OR

Explain HDLC and its modes of operation? What are the principles of **(10)** reliable data transfer.

Q. 4 What is IP protocol and addressing in the Internet Routing Algorithms, **(10)** Broadcast and Multicast Routing in network layer design issues?

OR

Explain connection less and connection oriented network routing algorithm **(10)** – optimality principle, shortest path, flooding.

Q. 5 Explain with a neat diagram client – server model? Explain client – server **(10)** application – HTTP, FTP.

OR

What is RPC? Explain Real time transport protocols and the internet **(10)** transport protocols?

Q. 6 a) What is communication security and Authentication protocol? **(10)**

OR

b) Explain in details public – key algorithms – Firewall, management of **(10)** public – keys.

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