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G.R. No.	
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**MARCH 2020 INSEM (T1)**  
**S. Y. B.TECH.(PROGRAM) (SEMESTER - IV)**

**COURSE NAME: COMPUTER NETWORKS**

**COURSE CODE: ITUA22183**

**(PATTERN 2018)**

Time: [1 Hour]

[Max. Marks: 20]

(\*) Instructions to candidates:

1. Attempt Q.1 **OR** Q.2, Q.3 **OR** Q.4, Q.5 **OR** Q.6
2. Figures to the right indicate full marks.
3. Use of scientific calculator is allowed.
4. Assume suitable data wherever required.

Q. 1) Enlist differences between LAN, MAN and Internet  
Elaborate Network as platform [8]

**OR**

Q. 2) Explain rule establishment during communication  
Enlist the common protocols that can be associated with rule establishment [8]

Q. 3) What are the responsibility of Physical layer and Data link Layer  
Explain how data encapsulation allows data to be transported across the network ? [8]

**OR**

Q. 4) Elaborate the basic characteristics of media access control methods on LAN topologies.  
Explain how a switch builds its MAC address table and forwards frames. [8]

Q. 5) Describe the purpose of the network layer in data communication.  
Explain the role of the major header fields in the IPv4 packet. [4]

**OR**

Q. 6) For Given IPv4 address 100.100.16.0/24  
Calculate [4]  
i. Network Address  
ii. Broadcast Address  
iii. How many total host address possible  
iv. If we make 4 sub-networks then what will be each subnetworking IP address range.