



Program:

Year/Part: III/I (2022)

Pass Marks: 32

Subject: Data Communication and Network

Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt any **EIGHT** questions.



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1. What is transmission impairment? Draw the block diagram of digital communication system and explain. [2+8]
2. What are the function of network device? Explain any two of them. Explain OSI reference model. [1+3+6]
3. What is transmission media? Write short notes on optical fiber and satellite communication. [2+4+4]
4. Discuss the error correction and error detection method in detail. [10]
5. Explain the architecture of LAN network with their advantages and disadvantages. Define ALOHA and token ring. [6+4]
6. Explain circuit switching and differentiate with packet switching. [5+5]
7. Explain the necessity of IPV₆. Differentiate between static routing and dynamic routing. [5+5]
8. What is flow control? Explain the different types of IP address classes. [2+8]
9. What is firewall? Explain active and passive attack in network. [4+3+3]
10. Write short notes on: (any **TWO**) [2×5]
 - a. DHCP
 - b. Cryptography
 - c. Network topology
 - d. Subnet mask and sub-netting
 - e. Framing

Good Luck !