

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION MO/2023)**

**CLASS: BTECH  
BRANCH: ECE**

**SEMESTER : VII  
SESSION : MO/2023**

**SUBJECT: EC407 COMPUTER NETWORKING**

**TIME: 02 Hours**

**FULL MARKS: 25**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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- Q.1(a) Differentiate among Ring, Bus, Star and Tree topologies. [2]  
Q.1(b) What does Spanning Tree Approach mean? How is it employed in routing? [3]
- Q.2(a) How is a FDDI Ring standard different from IEEE802 Ring standard? [2]  
Q.2(b) Compare 10BASE5 and 10BASE2 co-axial Bus LANs. What is Fast Ethernet? How it is different from traditional Ethernet? [3]
- Q.3(a) Give the message format of IGMP message and explain every field in brief. [2]  
Q.3(b) How ICMPv6 is different from ICMPv4? Discuss the different types of ICMP messages. [3]
- Q.4(a) What does Internet Control Message Protocol mean? Where is it used? [2]  
Q.4(b) What is the motivation behind implementation of IPv6 over IPv4? Compare the header formats of IPv6 and IPv4. [3]
- Q.5(a) What are the differences between classful addressing and classless addressing in IPv4? [2]  
Q.5(b) An organization is granted the block 211.17.180.0/24. The administrator wants to create 32 subnets. (a) Find the subnet mask, (b) Find the number of addresses in each subnet. [3]

**:::::20/09/2023 M:::::**