

## P131/CMP506/EE/20230118

**Time : 3 Hours**

**Marks : 80**

**Instructions :**

1. All Questions are Compulsory.
2. Each Sub-question carry 5 marks.
3. Each Sub-question should be answered between 75 to 100 words. Write every questions answer on separate page.
4. Question paper of 80 Marks, it will be converted in to your programme structure marks.

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1. Solve any **four** sub-questions.
    - a) Define computer network. Explain its applications. 5
    - b) Define the role of router, gateway, bridge, hub and switch. 5
    - c) Explain peer-to-peer computer network. 5
    - d) Explain components of computer network. 5
    - e) Explain LAN, MAN, WAN in detail. 5
  2. Solve any **four** sub-questions.
    - a) Explain different types of network topologies. 5
    - b) List the various protocols used in computer network explain any two in detail. 5
    - c) Explain Twisted-Pair cable with diagram. 5
    - d) What is FTP? Explain in detail. 5
    - e) Discuss satellite and Infrared communications. 5
  3. Solve any **four** sub-questions.
    - a) Explain the OSI reference model with neat diagram. 5
    - b) Explain IPv4 header format. 5
    - c) Define IP address. What is subnet masking? 5
    - d) What is virtual private network? 5
    - e) What is active and passive attack? Give some examples of each. 5

4. Solve any **four** sub-questions.
- a) Explain the role of network layer in OSI. 5
  - b) Define cryptography. What is hashing? Explain in detail. 5
  - c) Explain Intrusion Detection system in brief. 5
  - d) Define Firewall. What are the different types of firewalls? 5
  - e) What is computer security? Explain virus and worms. 5

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