

**GOVERNMENT POLYTECHNIC, NAYAGARH
PREPARED BY :- TANMAY NATH MISHRA
SUB :- COMPUTER NETWORK SYSTEM**

UNIT – I : Introduction to Computer Networks

2 Marks Questions

1. What is a computer network?
2. Define data communication.
3. List the components of data communication.
4. What is a protocol?
5. Define bandwidth.
6. What is latency?
7. What is throughput?
8. Define node.
9. What is topology?
10. What is network architecture?

5 Marks Questions

1. Explain different types of networks.
2. Explain network topologies.
3. Explain components of data communication.
4. Explain advantages and disadvantages of computer networks.

5. Explain client-server architecture.

10 Marks Questions

1. What is computer network? Explain its types and applications.
2. Explain different network topologies with suitable diagrams.

UNIT – II : OSI and TCP/IP Models

2 Marks Questions

1. What is OSI model?
2. How many layers are there in OSI model?
3. What is TCP/IP model?
4. List layers of TCP/IP model.
5. Define physical layer.
6. Define data link layer.
7. What is network layer?
8. What is transport layer?
9. What is application layer?
10. What is encapsulation?

5 Marks Questions

1. Explain OSI reference model.

2. Explain TCP/IP model.
3. Differentiate between OSI and TCP/IP model.
4. Explain functions of physical layer.
5. Explain functions of transport layer.

10 Marks Questions

1. Explain OSI model with neat diagram.
2. Compare OSI and TCP/IP models.

UNIT – III : Data Transmission and Media

2 Marks Questions

1. What is guided media?
2. What is unguided media?
3. Define transmission mode.
4. What is simplex mode?
5. What is half duplex?
6. What is full duplex?
7. What is bandwidth?
8. What is noise?
9. What is attenuation?

10. What is modulation?

5 Marks Questions

1. Explain transmission modes.
2. Explain guided transmission media.
3. Explain unguided transmission media.
4. Explain types of modulation.
5. Explain factors affecting data transmission.

10 Marks Questions

1. Explain different transmission media with diagrams.
2. Explain modulation techniques in detail.

UNIT – IV : Network Devices and Protocols

2 Marks Questions

1. What is a hub?
2. What is a switch?
3. What is a router?
4. What is a bridge?
5. What is gateway?
6. Define IP address.

7. What is MAC address?
8. What is DNS?
9. What is HTTP?
10. What is FTP?

5 Marks Questions

1. Explain network devices.
2. Explain IP addressing.
3. Explain DNS.
4. Explain HTTP and FTP.
5. Explain functions of router.

10 Marks Questions

1. Explain different network devices with functions.
2. Explain IP addressing and DNS in detail.

UNIT – V : Network Security and Applications

2 Marks Questions

1. What is network security?
2. Define firewall.

3. What is encryption?
4. What is decryption?
5. What is authentication?
6. What is virus?
7. What is malware?
8. What is phishing?
9. What is hacking?
10. What is cyber crime?

5 Marks Questions

1. Explain different types of network threats.
2. Explain firewall and its types.
3. Explain encryption techniques.
4. Explain authentication mechanisms.
5. Explain antivirus software.

10 Marks Questions

1. Explain network security in detail.
2. Explain cyber crimes and prevention techniques.