

Department of Information Technology

Jharsuguda Engineering School, Jharsuguda

QUESTION BANK: DCCN (Th.2), SEM: 4TH

Chapter-1

Short Questions carrying 2 marks

1. What do you mean by protocol? Name any five protocols.
2. What do you mean by subnet masking?
3. What do you mean by classless and class-full IP address?
4. Define TCP and UDP.

Long Questions carrying 5 marks or 7 marks

1. Describes the types of network architecture with diagram.
2. Discuss different modes of data communication.
3. Discuss the OSI layering architecture.
4. Explain TCP/IP layering model. Discuss how it differs from OSI layering model.
5. Discuss TCP/IP layering protocol architecture.
6. What do you mean by topology? Discuss different types of topology with diagram. List the advantages and disadvantages of all the topology.
7. What do you mean by IP address? Discuss different class of IP address.
8. How we can determine the host address and network address from a subnet mask? Describe with an example?

Chapter-2

Short Questions carrying 2 marks

1. List some of the transmission impairment.
2. Describe Nyquist theorem of SNR.
3. What is SNR? Discuss Shannon's channel capacity?
4. Define bit rate and baud rate.

Long Questions carrying 5 marks or 7 marks

1. What is the role of transmission media in data communication? Discuss category of transmission media used in data communication.
2. Discuss the working principle of Optical fiber.

Chapter-3

Short Questions carrying 2 marks

1. What do you mean by data encoding and decoding?

Long Questions carrying 5 marks or 7 marks

1. Explain different encoding mechanism for digital to analog conversion.
2. Discuss different encoding mechanism for digital to digital conversion.
3. Discuss different encoding mechanism for analog to digital conversion.
4. Discuss different encoding mechanism for analog to analog conversion.

Chapter-4

Short Questions carrying 2 marks

1. What do you mean by SYN and ACK flag?
2. What is the role of parity bit in framing?

Long Questions carrying 5 marks or 7 marks

1. Differentiate between synchronous and asynchronous transmission.
2. What do you mean flow control and error control in data communication?
3. Differentiate between P2P and multipoint configuration.
4. Define multiplexing. Discuss different multiplexing scheme.
5. How TDM differs from FDM.

Chapter-5

Short Questions carrying 2 marks

1. What do you mean by data encoding and decoding?
2. What is X.25?
3. What do you mean by datagram.

Long Questions carrying 5 marks or 7 marks

1. How packet switching differs from circuit switching?
2. What do you mean by congestion in data communication? How it can be controlled?
3. Explain the difference between virtual circuit and datagram.

Chapter-6

Short Questions carrying 2 marks

1. List any two differences between MAC address and IP address.
2. What is the difference between LLC and MAC protocol?
3. Difference between bridge and switch.
4. List the working layer in OSI model for the following devices.
Router, bridge, hub, repeater, switch

Long Questions carrying 5 marks or 7 marks

1. Illustrate CSMA/CD protocol and analyse it's importance.
2. Write short notes on WLAN.

Chapter-7

Short Questions carrying 2 marks

1. Why TCP/IP?
2. Difference between internet, Internet, Intranet and Extranet.
3. Write the full form of following protocol and write at least one sentence related to their functionalities: *DNS, DHCP, SMTP, ARP, HTTP, FTP, POP3, ICMP*.
4. What is WWW?
5. What is the function of firewall?

Long Questions carrying 5 marks or 7 marks

1. Explain routing and ARP table?
2. Draw and explain the TCP/IP protocol suite.

