

QP Code : 8082

Time : 3 hours

Total marks : 100

- Note: 1) Q1 is compulsory .Answer any four out of remaining six questions
2) All questions carry equal marks

- Q.1 **Answer the following briefly: (any four)** (20)
- (a) Compare TCP and UDP.
 - (b) Differentiate between OSI & TCP/IP Protocols.
 - (c) Explain fragmentation in IPv4.
 - (d) Explain ATM cell frame format.
 - (e) Describe CSMA/CA with a flow chart s implemented in WLAN.
- Q.2(a) Explain IPv4 datagram format in detail. What are the strategies for transition from IPv4 to IPv6. (10)
- (b) With a neat diagram, explain the frame format of Frame Relay . Explain how Congestion control and Quality of Service is implemented in it. (10)
- Q.3(a) Compare Ubiquitous and hierarchical access in Access Network design. Explain the steps for completing access layer design in detail. (10)
- (b) Mention the need for network security. Explain different security threats and safeguards. (10)
- Q.4(a) Which are the hardware components in SONET architecture? Draw the schematic diagram showing functional layers. Bring out the functions of each hardware component. (10)
- (b) Explain : (i) OAM & P (10)
(ii) RMON
- Q.5(a) With a neat diagram, Explain ATM Protocol architecture , bringing out the functions of ATM layer and various AAL layers. (10)
- (b) Explain DWDM technology in detail, with a neat schematic diagram of DWDM architecture., Bring out the advantages of Optical networking . (10)
- Q.6(a) Explain 'Hidden station problem' in Wireless LAN? How is it tackled? (10)
With respect to IEEE 802.11 Protocol , explain the following: DCF, PCF , NAV vector, MAC sublayer
- (b) Explain : (i) DMZ (ii) Layer 7 filtering (10)
- Q.7(a) Explain subnetting and supernetting with an example. (10)
- (b) What is a firewall? What are the capabilities and limitations of firewall? (10)
Discuss the different types of firewalls, along with their advantages and disadvantages.