

(3 Hours)

[Total Marks : 80

- N.B.:** (1) Question No. 1 is compulsory.
 (2) Attempt **any Three** from the remaining.
 (3) **Figures** to the **right** indicate **full marks**.
 (4) Assume suitable **data** wherever **required**.

1. Attempt **any Four** from the following : 20
 - (a) Draw and describe ATM cell in detail.
 - (b) Explain SONET frame format with neat diagram.
 - (c) Describe the term DMZ.
 - (d) What is the need of DWDM ? Explain its working principle.
 - (e) Draw and explain different states of devices in Bluetooth.
2. (a) Describe ubiquitous and hierarchical access and compare them. 10
 (b) With the neat diagram, explain frame format of Frame Relay, How congestion control is implemented in it. 10
3. (a) Explain Bluetooth protocol stack. 10
 (b) Explain ATM protocol architecture in detail. 10
4. (a) Draw and explain IEEE 802.15.4 LR-WPAN Device architecture. 10
 (b) With respect to network management, explain following terms : 10
 - (1) Documentation
 - (2) OAM & P
5. (a) Explain network security threats and network security safeguards. 10
 (b) What is firewall? What are the capabilities and limitation of firewall ? Discuss different types of firewall. 10
6. Write a short note on **Any Four** : 20
 - (a) NAT
 - (b) Role of VCI and VPI in ATM
 - (c) SNMP
 - (d) Steps for completing the Access N/W Design
 - (e) Packet filtering