

( 3 Hours )

[ Total Marks: 80 ]

- N.B.:** 1. Question No. 1 is compulsory.  
2. Answer **any three** from remaining questions.  
3. All questions carry **equal marks**.

- Q. 1 Answer **any four**: 20
- a) What is need for Wireless Sensor Network (WSN)? Mention applications.
  - b) How cell switching is done in Asynchronous Transfer Mode (ATM).
  - c) Explain the steps for completing access layer design.
  - d) What is IEEE 802.15.3a Ultra Wide Band (UWB)?
  - e) Differentiate between unicast routing and multicast routing protocols.
- Q.2 (a) With a neat diagram explain Bluetooth protocol stack with neat diagram. 10  
(b) Explain network security threats and safeguards in detail. 10
- Q. 3 (a) What is Remote Monitoring (RMON)? Explain the benefits of RMON. 10  
(b) Bring out the advantages of optical networking with a neat diagram, explain SONET hardware components. 10
- Q.4 (a) Enlist and explain various deployment models of cloud computing. 10  
What are key drivers to adoption of cloud?  
(b) Draw and explains Dense Wavelength Division multiplexing (DWDM) architecture in detail. 10
- Q.5 (a) Explain 802.11 Media Access Control (MAC) frame format. 10  
Describe the services offered by MAC.  
(b) Explain Open Shortest Path First (OSPF) protocol in detail. 10
- Q.6 Write a short note on **any four** : 20
- a) Compare Infrastructure networks and Ad-hoc networks.
  - b) Zigbee technology.
  - c) Impact of cloud on users.
  - d) Packet filtering.
  - e) Radio Frequency Identification (RFID).