

( 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**:

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- What is need for Wireless Sensor Network (WSN)? Mention applications.
- How cell switching is done in Asynchronous Transfer Mode (ATM).
- Explain the steps for completing access layer design.
- What is IEEE 802.15.3a Ultra Wide Band (UWB)?
- Differentiate between unicast routing and multicast routing protocols.

Q.2 (a) With a neat diagram explain Bluetooth protocol stack with neat diagram.

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(b) Explain network security threats and safeguards in detail.

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Q. 3 (a) What is Remote Monitoring (RMON)? Explain the benefits of RMON.

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(b) Bring out the advantages of optical networking with a neat diagram, explain SONET hardware components.

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Q.4 (a) Enlist and explain various deployment models of cloud computing.

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What are key drivers to adoption of cloud?

(b) Draw and explains Dense Wavelength Division Multiplexing (DWDM) architecture in detail.

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Q.5 (a) Explain 802.11 Media Access Control (MAC) frame format.

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Describe the services offered by MAC.

(b) Explain Open Shortest Path First (OSPF) protocol in detail.

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Q.6 Write a short note on **any four** :

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- Compare Infrastructure networks and Ad-hoc networks.
- Zigbee technology.
- Impact of cloud on users.
- Packet filtering.
- Radio Frequency Identification (RFID).