

Duration: 3hrs

[Max Marks: 80]

- N.B.:** (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

- 1** Attempt any FOUR **[20]**
- a** Illustrate the architecture of a wireless networks.
 - b** Explain Zigbee topologies with proper diagram.
 - c** Discuss characteristics of VANETs.
 - d** Recommend a need of link budget analysis and its requirement in wireless network.
 - e** Explain the characteristics of Wireless Mesh Networks
- 2 a** Write a short note on IEEE 802.11. **[10]**
- b** What are the factors influencing design of Wireless Sensor Network. Describe the components of a sensor node. **[10]**
- 3 a** Describe WBAN architecture with its applications. **[10]**
- b** Explain UWB technology with radio specifications and architecture. **[10]**
- 4 a** Compare Adhoc and Cellular Networks. **[10]**
- b** Draw the suitable diagrams for the downlink and uplink link budgets for GSM 1800 and give their equations of signal received(S) and noise (N). **[10]**
- 5 a** Construct WiMAX network architecture. Review the features of WiMAX. **[10]**
- b** Write short note on 6LoWPAN. **[10]**
- 6 a** Explain the RTS/CTS mechanism in MACA protocol used to solve the problems of Hidden and Exposed node **[10]**
- b** Describe architecture of IoT with any one example. Explain M2M communication. **[10]**
