Time: 3 Hours   **Marks: 80**

Note: 1. Q. No1 is compulsory
      2. Solve any three questions out of the remaining   five
      3. Figures to right indicate full marks
      4. Assume suitable data where necessary

Q.No1   Solve any four   **(20)**

  a) Explain the difference between an Infrastructures based Network and an Adhoc
     Network of   WLAN

  b) Compare Frequency Hopping spread spectrum and Direct Sequence Spread
     Spectrum

  c) Explain role of SGSN and GGSN in GPRS

  d) Outline the method that supports mobility in CISCO Unified Wireless Network

  e) Compare IEEE802.11 and IEE802.16

Q. 2 a. Draw and explain 4G network architecture and compare with 3G   **(10)**

    b. What are the different types of GSM logical Channels? Explain in detail   **(10)**

Q. 3. a. Give the significance of WEP protocols. What are the features of WPA2   **(10)**

    b. Give the features of Cisco Unified Wireless Network   and explain its architecture   **(10)**

Q.4. a. What are the various challenges in WSN and explain the architecture of WSN   **(10)**

    b. What do you mean by massive MIMO, Compare 1G- 5G mobile standards.   **(10)**

Q. 5 a. Explain Zigbee protocol stack   **(10)**

   b. i)Compare VANET and MANET
    ii) State the features of LoRaWAN   **(10)**

Q.6

  a. Draw and explain Bluetooth Architecture   **(10)**

  b. Describe the system architecture of 802.11   **(10)**

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