

TE INFT R-19 C-Scheme Winter 2025 Sem VI KT  
5/12/25

(Time: 3 Hours)

(Total Marks: 80)

- N.B. 1. Question No. 1 compulsory.  
2. Attempt any three out of remaining five questions.  
3. Figures to the right indicate full marks.  
4. Draw neat diagram wherever necessary.

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| Q1 | Attempt any <b>Four</b> of the following:  | 20 |
|    | a. Outline the method that supports mobility in CISCO Unified Wireless Network.                          | 5  |
|    | b. Explain the different features of VANET and E-VANET.  | 5  |
|    | c. State the advantages of TDMA over FDMA.   | 5  |
|    | d. Differentiate between FHSS and DSSS.  | 5  |
|    | e. Write note on UMTS security.  | 5  |
| Q2 | Attempt the following:   |    |
|    | a. Write short note on: EDGE for 2.5G GSM and IS-136.  | 10 |
|    | b. Draw and explain the GSM time slot hierarchy.   | 10 |
| Q3 | Attempt the following:   |    |
|    | a. Explain the architecture of Bluetooth. Explain active, hold and park mode of operations in Bluetooth. | 10 |
|    | b. Draw and explain the architecture of Cisco UWN with its features.                                     | 10 |
| Q4 | Attempt the following:   |    |
|    | a. Draw and explain MANET. What are the design challenges in MANET?                                      | 10 |
|    | b. Draw and explain LTE network architecture in detail.  | 10 |
| Q5 | Attempt the following:   |    |
|    | a. Draw and explain wireless sensor network communication architecture.                                  | 10 |
|    | b. Explain 4G network architecture with its specifications.  | 10 |
| Q6 | Attempt the following:   |    |
|    | a. With the help of neat diagram, explain the digital signature process.                                 | 10 |
|    | b. Draw and explain OFDMA technique for multiplexing.  | 10 |

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