

M.E. Second Semester (Electronics & Tele.) (Full Time) (C.G.S.- New)

**13342 : Wireless Communication**

**2 ENTC 2**

P. Pages : 2

Time : Three Hours



**AW - 3635**

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answer necessary with the help of neat sketches.

**SECTION - A**

1. a) Derive an expression for channel capacity for flat fading channel. 7  
b) Explain in brief the knife edge diffraction model. 7

**OR**

2. a) Obtain an expression for time invariant frequency selective fading channel. 7  
b) Discuss in brief the basic diversity combining techniques. 7
3. a) Explain in brief the GSM air specifications. 6  
b) Explain the TDMA time frame structure of GSM alongwith its hierarchy. 7

**OR**

4. a) Explain how the progress of call handling takes place in AMPS. 6  
b) Explain the reverse CDMA channel modulation process for IS95 CDMA system. 7
5. a) Explain in brief the deployment of sensor networks in wireless communication. 7  
b) Explain in brief the fixed wireless sensor networks. 6

**OR**

6. a) Discuss in detail the various design issues in sensor network. 8  
b) Discuss in detail the applications of wireless sensor networks. 5

**SECTION - B**

7. a) Compare the cordless telephony standards CT2, DECT and PCS in terms of the following parameters : 9
  - i) Frequency band
  - ii) Duplexing
  - iii) Multiple access
  - iv) Modulation
  - v) Frame duration
  - vi) Carrier spacing

- b) Explain the IEEE 802.11 standards. 5

OR

8. a) Explain the architecture and characteristics of DECT. 8  
b) Discuss the radio specifications of the PCS system. 6
9. a) Discuss in detail the security issues related to the Wi-Fi environment. 7  
b) Enlist the applications of : 6  
i) Wifi ii) WiMax

OR

10. Draw and explain in detail the Bluetooth protocol stack along with its different class standards. 13
11. a) Explain in brief the private mobile radio standards. 7  
b) Discuss the scenarios for partitioning and location of service information related to UPT. 6

OR

12. a) Explain how the TETRA systems are superior to the PMR. 6  
b) Explain the different IMT evolution aspects for IMT-2000 in brief. 7

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