

M.E. Second Semester (Electronics & Tele.) (Full Time) (C.G.S. - New)
13342 : Wireless Communication : 2 ENTC 2

P. Pages : 2

Time : Three Hours



AU - 3466

Max. Marks : 80

- Notes :
1. All question carry marks as indicated.
 2. Answer **three** question from Section A and **three** question from Section B.
 3. Due credit will be given to neatness and adequate dimensions.
 4. Assume suitable data wherever necessary.
 5. Illustrate your answer necessary with the help of neat sketches.
 6. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION - A

1. a) Explain the following diversity techniques : 7
 - i) Polarization diversity.
 - ii) Frequency diversity.
 - iii) Time diversity.
- b) Discuss the various physical factors in the radio propagation channel which influence small scale fading. 6

OR

2. a) Discuss a discrete - time AWGN channel capacity of wireless channel. 6
b) Discuss the following characteristics of the wideband channel. 7
 - i) Doppler power spectrum and
 - ii) Coherence time.
3. a) Draw and explain GSM architecture in detail. 7
b) Explain forward CDMA channel modulation process. List IS - 95 forward traffic channel modulation parameter. 7

OR

4. a) Explain signal processing in GSM. 7
b) Explain AMPS voice modulation process. What is the advantage of using Manchester code in voice channel. 7
5. a) What is wireless sensor networks? Discuss their advantages over wired. 6
b) How sensor networks are classified? Discuss design issues in sensor network. 7

OR

6. a) How security can be provided in an adhoc network? What are possible schemes and their relative advantages? 7
- b) Discuss various networks characteristics of wireless sensor networks. 6

SECTION - B

7. a) What is CT2 standard? Define three interfacing signaling layers & speech coding techniques. 7
- b) Explain the following with reference to DECT. 7
- i) Channel types
- ii) Speech coding
- iii) Channel coding

OR

8. a) Draw and explain DECT TDMA frame structure in detail. 7
- b) Explain in brief : 7
- i) Pacific digital cellular standard (PDC).
- ii) Personal Handyphone system (PHS).

9. a) What is Bluetooth? Give its radio and baseband specifications. 7
- b) Explain WAP protocol stack. 6

OR

10. a) Explain Wi-max architecture in detail. 7
- b) Discuss the security issues in WiFi environment. 6
11. a) Discuss the scenarios for portioning and location of service information related to UPT. 7
- b) Explain the following : 6
- i) Requirement of PMR Services
- ii) PMR standards.

OR

12. a) Draw TETRA Network architecture and explain in brief. 6
- b) What are different operations for secure UPT access? Describe schemes based on Personal Identification numbers. 7
