M.E. First Semester (Computer Science & Infor. Tech.) (New-CGS)

13182 : Wireless Communication & Network Computing : 1 RNME 4

P. Pages : 2

Time : Three Hours

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AW - 3873

Max. Marks : 80

Notes : 1. Due credit will be given to neatness and adequate dimensions.
2. Assume suitable data wherever necessary.
3. Diagrams and chemical equations should be given wherever necessary.
4. Retain the construction lines.
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) What do you mean by source coding? Explain difference between source & channel coding. 7

b) Explain advantages and disadvantages of present wireless communication. 7

OR

2. a) Explain uniform and non-uniform quantization. 7

b) Explain first generation, second generation & Third generation wireless system. 7

3. a) Explain basic signal propagation mechanisms in detail. 7

b) List three types of fading. Explain how each one typically occurs. 6

OR

4. a) In what ways is radio propagation on land different from that in free space. 6

b) Differentiate between area to area prediction model and P-M-P propagation model used for estimating radio coverage in a mobile radio communication. 7

5. a) What do you mean by DAB? Explain why it is necessary. 7

b) Explain application and advantages of MIMO. 6

OR

6. a) Differentiate between IEEE 802.11 and IEEE 802.16. 6

b) What is simulation? Explain suitable simulation software for wireless communication. 7

SECTION - B

7. a) Explain Direct Sequence Multiple Access. Explain features of DS Spread Spectrum Techniques. 8

b) Explain Global System for mobile network architecture in detail. 6

OR

8. a) What is GSM? Explain GSM signaling protocol architecture. 7

b) Explain the techniques of FDMA and TDMA and compare these techniques. 7

9. a) What is i-mode? Explain i - mode architecture in detail. 6

b) Explain how does a wireless network transmit data. 7

OR

10. a) What is the difference between GSM and UMTS? Explain in detail. 7

b) Explain RFID structure in detail. 6

11. a) What is public key? Explain difference between public & private key. 7

b) What are the features of 4^{th} generation? Explain in detail. 6

OR

12. a) Explain 6
i) Two-way wireless communication
ii) Radio waves
iii) Digital certificate

b) Explain working of last mile connection in wireless communication System. 7

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