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**Question Paper Code: 22021**

M.E. DEGREE EXAMINATION, MAY 2014.

Second Semester

Communication Systems

01PCM201 - MOBILE COMMUNICATION NETWORKS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. Name the three subsystems in the GSM architecture.
2. Define mobility management.
3. What is the role of SGSN in GPRS networks?
4. List the functions of MAC sublayer in IEEE 802.11.
5. What is the function of wireless session protocol?
6. What are the main objectives of IMT 2000?
7. Give the significance of narrowband WLL technology.
8. What are the different frequency bands available for WiMAX standard?
9. What is meant by key recovery in wireless security systems?
10. What are the three components of integrity codes?

PART - B (5 x 14 = 70 Marks)

11. (a) Explain in detail the handoff management in PCS networks.

(14)

Or

(b) Write short notes on

(i) GSM frame structure. (7)

(ii) Signal processing techniques in GSM. (7)

12. (a) Explain in detail the functioning of IEEE 802.11 physical layer. (14)

Or

(b) Discuss the transparent and non transparent methods of data transport in GPRS networks. (14)

13. (a) Discuss in detail WAP Gateway architecture and protocols. (14)

Or

(b) Write short notes on

(i) WCDMA. (7)

(ii) CDMA 2000. (7)

14. (a) Discuss the multiple access technology used for WiMAX. (14)

Or

(b) Explain in detail the GLOBALSTAR mobile satellite system for worldwide personal communications. (14)

15. (a) Discuss the authentication and encryption algorithms used in IPSEC. (14)

Or

(b) Discuss the mobile and wireless security issues. (14)

PART - C (1 x 10 = 10 Marks)

16. (a) Explain the RADIUS protocol used for security. (10)

Or

(b) Explain the Wired Equivalent Privacy algorithm used for wireless LAN security. (10)