Reg. No. : | | | | | | | | | | | |

Question Paper Code : S 4689

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Sixth Semester

Information Technology

IF 365 — MOBILE COMMUNICATION

(Regulation 2001)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What do you mean by cellular frequency reuse?

2. Define dropped call rate.

3. What are two common techniques used for generating an SSB signal?

4. Give the Nyquist criterion for ISI cancellation.

5. What are the loss producing mechanisms in a wireless channel?

6. What is smart antenna?

7. What are the criteria for choosing speech code for mobile communication?

8. What are the components WAP architecture?

9. Mention some of the applications of satellite communication.

10. What is MSAT? Where is it used?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss the types of non co-channel interferences. (8)

(ii) Explain the concept of cell splitting in cellular system. (8)

Or

(b) Describe handoff strategies and its types. (16)

12. (a) Explain the various FM detection techniques. (16)

Or

(b) (i) Explain GMSK transmitter and receiver with the help of a neat block diagram. (10)

(ii) Discuss the factors that influence the choice of digital modulation. (6)

13. (a) Explain the different propagation mechanisms which impact mobile communications. (16)

Or

(b) List the various diversity techniques and explain in detail. (16)

14. (a) Discuss GSM architecture, channel types and frame structure. (16)

Or

(b) (i) Explain the reverse CDMA channel modulation process. (8)

(ii) Explain the features of TDMA. (8)

15. (a) Explain the salient features of LEO and MEO. (16)

Or

(b) (i) Explain the operation of a GPS system. (8)

(ii) Write notes on Direct Positioning System. (8)

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