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MCA-402(N)

M. C. A. (Fourth Semester)
EXAMINATION, June, 2007

(New Scheme)

MOBILE COMMUNICATION

[MCA-402 (N)]

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 40

Note : Attempt any five questions. All questions carry equal marks.

1. (a) Explain the operation of basic cellular system.
(b) Explain the concept of reuse channels schemes and distance.
2. (a) Discuss the handoff phenomenon in detail.
(b) What is fading ? Explain small scale fading and multipath fading.
3. (a) During a busy hour the number of calls per hour Q_i , for each of 10 calls is 2000, 1500, 3000, 500, 1000, 1200, 1800, 2500, 2800, 900. Assume that 60% of the car phones will be used during this period and that call is made per car phone. Evaluate the number of customers in the system.

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- (b) Discuss the designing of an omnidirectional antenna system in the worst case.
4. (a) Give detailed comparison between TDMA, FDMA and CDMA.
(b) Explain GSM architecture. What is layer modeling ?
5. (a) What are mobility and security management in GSM ?
(b) Discuss transmission media for wireless LAN.
6. (a) What are various digital cellular systems ? Explain each in brief.
(b) Give various applications of wireless LAN.
7. (a) Discuss IEEE 802.11 standards.
(b) How do inclination and elevation determine the use of a satellite ?
8. Write short notes on any two of the following :
 - (i) FHSS and DSSS
 - (ii) Error coding and correction
 - (iii) GRPS architecture
 - (iv) Components of VSAT system
 - (v) Blue tooth technology