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**Question Paper Code : 75568**

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Elective

Software Engineering

XIT 004 – MOBILE COMPUTING  
(Common to 5 Year M.Sc. Information Technology)

(Regulation 2003)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is hidden and exposed terminals problem?
2. Define borrowing channel allocation.
3. What is the need for Handover?
4. What is GEO and LEO?
5. List the advantages of HiperLAN2 over HiperLAN1.
6. Define ad-hoc piconet.
7. What is care-of address?
8. What is MANET?
9. What is card and deck in WML?
10. List the advantages of WMLScript over WML.

PART B — (5 × 16 = 80 marks)

11. (a) (i) What are the difference between Frequency Division Multiplexing and Time Division Multiplexing? (8)
- (ii) How are Classical Aloha and Multiple access with collision avoidance methods working? Explain. (8)

Or

- (b) (i) Write about Direct sequence spread spectrum and Frequency hopping spread spectrum. (8)
- (ii) What is modulation? Explain about the different basic schemes in modulation? (8)



12. (a) (i) Describe about the GSM Mobile services. (8)  
(ii) Explain about the security services offered by the GSM. (8)

Or

- (b) (i) Write about the steps involved in Mobile terminate call and Mobile originated call. (8)  
(ii) Describe the typical satellite system for global mobile telecommunication with neat diagram. (8)
13. (a) (i) Explain about the Bluetooth security components and protocols. (8)  
(ii) Describe the power management in IEEE 802.11 adhoc networks. (8)

Or

- (b) (i) Explain about the working process of Link manager protocol. (8)  
(ii) Describe about the IEEE 802.11 MAC packet structure with a diagram. (8)
14. (a) (i) What is encapsulation? Describe in detail about the IP-in-IP encapsulation. (8)  
(ii) Explain about the Mobile IP packet delivery. (8)

Or

- (b) (i) Describe about any one of the MANET routing protocol. (8)  
(ii) What is Mobile Agent? How the agent is discovered in the Mobile IP? (8)
15. (a) (i) Explain the components and interface of the WAP architecture. (8)  
(ii) Describe about the wireless transaction protocol. (8)

Or

- (b) (i) Explain about the Wireless application environment with a diagram. (8)  
(ii) Describe about the Push architecture in detail (8)