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Question Paper Code : 65039

5 Year M.Sc. DEGREE EXAMINATION, MAY/JUNE 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. Define Smart Systems. Give two examples.

2. List out the energy constraints of mobile devices.

3. What is handover? Mention the types of handover.

4. Define cyclic data repetition.

5. What are the phases of HIPERLAN?

6. Give the structure of a Bluetooth frame.

7. Define Mobility binding.

8. Differentiate routing cache and paging cache.

9. Mention the security issues in Wireless protocols.

10. Define XML parser. Mention any two XML parsers.

PART B — (5 × 16 = 80 marks)

11. (a) (i) With a neat diagram, explain the reference model of mobile systems. (10)

    (ii) Discuss the technical challenges dealt by mobile systems. (6)

Or

    (b) (i) Explain the various types of multiplexing techniques applied in wireless transmission. (10)

    (ii) Write short notes on cellular systems. (6)

12. (a) (i) Explain GSM architecture in detail and discuss the GSM services. (12)

    (ii) Briefly explain the data channels in cellular system. (4)

Or

    (b) (i) Compare the characteristic features of UMTS and IMT-2000. (8)

    (ii) Write short notes on Satellite systems. (8)

13. (a) Explain the System Architecture and services of IEEE 802.11 with suitable diagrams. (16)

Or

    (b) (i) Describe the role of MAC sublayer. Explain how MAC overcame hidden terminal problems. (8)

    (ii) Discuss the security features of Bluetooth enabled devices. (4)

    (iii) What are the limitations of wireless LAN? Discuss. (4)

14. (a) (i) What are the goals of mobile IP? Explain the applicability of Mobile IP and Cellular IP. (8)

    (ii) Explain packet delivery and location management in Mobile IP. (8)

Or

    (b) (i) Discuss upon Tunneling and Encapsulation. (8)

    (ii) Explain about the routing strategy of Ad-hoc networks. (8)

15. (a) Explain the WAP architecture. Discuss the advantages and disadvantages of WAP. (16)

Or

    (b) (i) Discuss WML script and WTP. (8)

    (ii) What are XML document models? Explain with the corresponding parsers. (8)

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