

Code No: R5410506

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IV B.Tech I Semester(R05) Regular/Supplementary Examinations, December 2009

MOBILE COMPUTING

(Common to Computer Science & Engineering, Information Technology and Electronics & Computer Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

KOTTAM
INSTITUTIONS

1. Explain the protocol architecture for signaling by GSM. [16]
2. (a) Is interference avoided in CDMA? Comment.
(b) What is a good coding sequence in CDMA? Explain with an example.
(c) What is the bandwidth utilization of CDMA? [4+8+4]
3. (a) What is the difference between Address and Care of address? Why care of address is required in mobile IP. What are the two methods of locating care of Address?
(b) What is the information that is maintained by home agent and foreign agent? [10+6]
4. Explain in detail Snooping TCP. [16]
5. What are the characteristics of pervasive computing application? Explain them in detail. [16]
6. (a) With the neat sketch explain the architecture of adaptive hybrid broad cast mechanism.
(b) Explain the hashing based scheme in detail. [10+6]
7. What is mobile ad-hoc network? Explain in detail about MANETS. [16]
8. Explain in detail about push/pull services? [16]

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1. Explain in detail about GSM. [16]
2. What are the different MAC problems which result in packet loss? Suggest suitable solutions for the problems identified.[16]
3. (a) What is the role of Home agent and Foreign agent in mobile IP?
(b) What are the two possibilities for location of COA? [8+8]
4. (a) Mobility is supported by network layer using mobile IP. What is the necessity of mobile transport layer?
(b) How multiplexing and demultiplexing is done by transport layer? [8+8]
5. What are the factors effected with cache .Discuss the performance of these factors by caching. [16]
6. Explain in detail pull based mechanisms. [16]
7. What are the advantages of MANETS and explain in detail? [16]
8. Explain in detail about push architecture. [16]

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1. How connections are maintained inspite of mobility in wireless and mobile networks. What is the infrastructure that is required and how it is used. How handover works.
[16]
2. (a) What are the limitations of wireless networks? Suggest solutions to reduce their impact.
(b) Compare FDMA with TDMA. [10+6]
3. With the help of an example diagram, explain how IP packets are transferred from fixed node to mobile node.
[16]
4. (a) Why Indirect-TCP segments TCP connection in to a fixed part and a wireless part?
(b) What are the advantages and disadvantages of Indirect TCP? [8+8]
5. (a) Discuss the problem associated with cache.
(b) What are the problem involved in client mobility. [8+8]
6. With an example explain how push-based data delivery system works. [16]
7. (a) Discuss the security issues in MANET.
(b) Bring out the differences between destination sequence distance vector and standard distance vector algorithm.[8+8]
8. Why does WAP define its own security layer and does not rely on the security provided by the mobile phone network? What problem does the WAP security layer causes? Think of end-to-end security.[16]

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1. Explain about GPRS. [16]
2. (a) What is code sequence in CDMA? What is the significance of orthogonal code sequences? Explain with an example.
(b) What is autocorrelation? What is its significance? Explain with an example. [10+6]
3. (a) One approach to handling mobility is to have specific routes to the mobile node and routers always choose the best fitting prefix for the routing decision. What is the problem with this solution?
(b) Mobility can be supported at different layers. Why IP layer is chosen for mobility? [6+10]
4. What are the mechanisms of traditional TCP that influence its efficiency in a mobile environment? Explain it [16]
5. Write a short notes on the following:
(a) Wired Qos
(b) Client - server computing
(c) Hand over Qos. [5+5+6]
6. With an example explain how push-based data delivery system works. [16]
7. Distinguish between proactive and reactive routing protocols. Discuss the suitability of these protocols in mobile ad-hoc networks.[16]
8. Explain in detail about physical layer of Bluetooth? [16]