

Printed Pages : 4



NMCA414

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 214428

Roll No.

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MCA
(SEM. IV) THEORY EXAM. 2014-15
MOBILE COMPUTING

Time : 3 Hours]

[Total Marks : 100

Note : Attempt the questions as indicated.

Q1. Attempt any *four* questions from the following : 5x4=20

- (a) What is the fundamental role of mobile computing in wireless communication? Discuss major area of it.
- (b) Describe cellular systems. Explain 3 cell and 7 cell clustering.

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- (c) Explain general view of wireless telephony along with its advantages and disadvantages.
- (d) Describe various data management issues related to mobile computing.
- (e) What is GPRS? Discuss its architecture.
- (f) Compare GSM with CDMA.

Q2. Attempt any *four* questions from the following : $5 \times 4 = 20$

- (a) Why WLANs are used? Give its merits and demerits.
- (b) How the fairness problems regarding channel access is solved in IEEE 802.11?
- (c) What is Bluetooth? Give its technical specifications.
- (d) Discuss data broadcasting in detail.
- (e) Explain tunneling, encapsulation and registration.
- (f) What kind of problems may arise if TCP is implemented over wireless networks? Explain.

Q3. Attempt any *two* questions from the following : 10x2=20

- (a) Show the status of client in CODA. How conventional file systems react to disconnected system?
- (b) How clustering is done in wireless transmission? Give any suitable example.
- (c) How does mobility affect data replication when we consider replicating on mobile platforms? Discuss different possible replicating schemes.

Q4. Attempt any *two* questions from the following : 10x2=20

- (a) Explain the packet format of agent advertisement along with mobility extension.
- (b) What is mobile agent? Explain its architecture.
- (c) Discuss security in mobile computing and also explain conventional encryption algorithm.

Q5. Attempt any *two* questions from the following : 10x2=20

- (a) Why routing in Adhoc networks is complicated? What are the special challenges? Give some examples of Adhoc networks.
 - (b) Describe any two of the following : DSDV, DSR, AODV
 - (c) What do you understand by MANET? Describe some real life scenarios where it can be used.
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