

Roll No.

67218

**MCA 5th Semester CBCS
Scheme (w.e.f. 2018-19)
Examination – December, 2018**

MOBILE COMPUTING

Paper : 18MCA35DB2

Time : Three Hours]

[Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all. Question Number 1 will be *compulsory*. In addition to *compulsory* question, student will have to attempt *four* more questions selecting *one* question from each Unit. All questions carry equal marks.

1. (a) What are the characteristic of a mobile computing environment ? 8 × 2
- (b) Differentiate between FDMA and TDMA.
- (c) What level of security does mobile-IP provide ?
- (d) What are the limitations of mobile computing ?

- (e) What is the different random assignment scheme in MAC ?
- (f) Write about the supplementary services in GSM.
- (g) What is hoarding in mobile computing ?
- (h) What is snooping TCP ?

UNIT – I

2. Briefly describe the following networks with example and applications : 16
 - (i) Wired networks
 - (ii) Wireless networks
 - (iii) Ad hoc networks
3. (a) What are the different tiers in three-tier architecture ? Describe the functions of these tiers. 8
- (b) In GSM network, there are some databases used for various purposes. What are they ? What is their function ? 8

UNIT – II

4. (a) What is mobile-IP ? Explain the requirements of mobile-IP. 8
- (b) Explain how tunneling work does for mobile-IP using IP-in-IP. 8
5. (a) Explain mobile terminating call in the context of GSB networks. 8

- (b) What are the functions of authentication and encryption in GSM ? How is system security maintained ? 8

UNIT – III

6. (a) Explain about power aware computing ? 6
- (b) What is query processing ? 4
- (c) What is meant by balanced Push-Pull mechanism ? 6
7. (a) Explain the following techniques : 12
 - (i) Directory method
 - (ii) Flexible indexing method
- (b) What are the advantages of data broad cast over point-to-point access ? 4

UNIT – IV

8. Define a MANET. List the main difference between Adhoc networks and other networks. What advantages do Adhoc networks offer ? Also discuss the various issues related to MANET's. 16
9. (a) Explain the wireless MAC issues in detail. 8
- (b) How does dynamic source routing handle routing ? What is the motivation behind dynamic source routing compared to other routing algorithms for fixed networks ? 8