

Roll No

MCTA-302(D)
M.E./M.Tech., III Semester Examination, June 2020
Mobile Computing
(Elective-II)
Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Describe Hidden and exposed terminal problem.
b) What are the limitations and challenges of mobile computing?
2. A certain city has an area of 1300 square miles and is covered by a cellular system using a seven cell reuse pattern. Each cell has a radius of 4 miles and the city has 40MHz spectrum with a Full duplex channel bandwidth of 60 KHz find
 - i) The number of cell in the service area
 - ii) The number of channel per cell
 - iii) Total number of subscribers that can be served
3. a) Explain digital cellular system and its advantages?
b) What is mobile to mobile propagation?
4. a) What is the for Frequency reuse? Explain the frequency reuse concept and show that $N = i^2 + j^2$ Where N is the number of cells per cluster.
b) Explain fixed channel assignment.
5. Discuss the 'handoff' strategies employed in the design of a mobile communication system.
6. Explain following term
 - i) Formula of dropped call rate
 - ii) Non fixed channel assignment
 - iii) Foliage loss.
7. a) With suitable block diagram explain the GSM system.
b) Explain the concept of mobile IP.
8. Write short notes:
 - i) CDMA
 - ii) Dropped calls
 - iii) Co-channel interference
 - iv) Cell-splitting
