

EC - 602
B.E. VI Semester
Examination, December 2014
Cellular Mobile Communication
Time : Three Hours
Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Describe basic cellular system and its component.

b) Describe the performance criteria of mobile telephone system.

a) Discuss frequency reuse in a cellular system. Also discuss the problem arising due to frequency reuse.

b) What is the need of cell splitting? Explain various cell splitting techniques.

3. a) How will you increase the cell coverage for a noise limited system.

b) Explain the propagation of land to mobile transmission over water.

4. a) Describe antennas used at cell site. Discuss unique situations of cell site antenna.

b) Explain point to point predictions model for obtaining path loss in obstructive condition.

5. a) What is co-channel interference. Derive the expression for co-channel interference.

b) Describe the near end far-end interference in one cell and in the two system cell.

6. a) What do you understand by fixed and non fixed channel assignment explain in detail.

b) What is hand off mechanism? Explain.

i) Initiation of hand off

ii) Delaying a hand off

iii) Forced hand off

iv) Queuing of hand off

7. a) Explain GSM architecture. What is layer modeling? Explain.

b) Explain modulation, characteristics call processing and hand off procedures for CDMA.

8. Write short notes on any two of the following

i) Foliage loss

ii) Mobile antennas

iii) Design of antenna system

iv) Dropped call rate formula