

Cellular Mobile Communication (Elective-IV)

Time: Three Hours

Maximum Marks: 70

Note: i) Attempt any one question from each unit, ii) All questions carry equal marks.

Unit-I

- 1.a) Discuss the performance criteria of cellular system.
- b) Determine the desired C/I in an omni - directional antenna system.

OR

- 2.a) Discuss how to plan a cellular system and its operation.
- b) Discuss the concept of frequency reuse channels and co - channel interference.

Unit-II

- 3.a) Discuss the signal propagation over flat open area.
- b) Discuss about the unique situations of cell site antennas.

OR

4. a) Determine the path loss from point to point prediction model.
- b) Discuss about the equivalent circuits of antennas and their gain and pattern relationships.

Unit-III

- 5.a) How to measure a real time co-channel interference at mobile radio transceivers.
- b) Discuss about the UHF TV interference.

OR

6. a) How to reduce co - channel interference and also explain umbrella- pattern effect?
- b) Discuss about the effects of coverage and interference by applying power decrease.

Unit-IV

7. a) Discuss about the non-fixed channel assignment algorithms.
- b) Explain about the mobile assisted hand off and soft hand off.

OR

8. a) Discuss about the fixed channel assignment algorithms,
- b) Explain about the cell-site hand off and inter system hand off.

Unit-V

9. a) Explain the working principle of GSM with the help of GSM-architecture.
- b) Discuss the principle working of PDC and PCN systems.

OR

10. a) Discuss the principle working of CDMA system.
- b) Discuss the principle working of TDD systems and PCS systems.