

Roll No.....
Total No. of Questions: [09]

Total No. of Printed Pages: [01]

B. Tech. (EE) (Semester: 6th/7th)
CELLULAR AND MOBILE COMMUNICATION
Subject Code: BECEO1002
Paper ID: [18OE111523]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

- Q1. Attempt the following:
- a) What do you mean by call hand-off?
 - b) Define: Co-channel Interference.
 - c) List the classification of generations of cellular mobile systems.
 - d) Define Spectrum Utilization factor.
 - e) Give the need of hand-off in mobile communication.
 - f) Define: Coherence time & System capacity.
 - g) List some common techniques to increase frequency spectrum utilization.
 - h) What is Grade of Service?
 - i) What is the minimum separation required between cell site antennas?
 - j) Define Paging channel.

Section – B

(5 marks each)

- Q2. Discuss the significance of frequency re-use in cellular radio channels.
- Q3. Differentiate between Analog and Digital Cellular systems giving examples.
- Q4. Explain the effect on coverage and interference of mobile link by decrease in transmitted power level.
- Q5. Explain how a diversity receiver reduces the interference?
- Q6. Discuss the Channel assignment to the cell sites based on adjacent channels.

Section – C

(10 marks each)

- Q7. Discuss in details the operation of a basic cellular system. Also give its performance criteria.
- Q8. What are the various Hand-off strategies based on algorithms of handoff? Explain in details.
- Q9. Write a note on: Mobile to Mobile Propagation.