

Roll No .....

**EC-602****B.E. VI Semester**

Examination, June 2014

**Cellular Mobile Communication****Time : Three Hours rgpvonline.com Maximum Marks : 70**

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

**Unit - I**

1. a) What is a cellular system? Explain with the help of a neat diagram. What is the cellular concept? Why hexagonal cells are used in cellular system? 7
- b) Explain the concept of frequency reuse in a cellular system. What is the necessity of frequency reuse? What is reuse factor? 7

OR

2. a) What is co-channel interference? What is the main reason for it? How can be co-channel interference be reduced? 7
- b) What is handoff mechanism in cellular mobile system? What is its necessity? What are different handoff types? 7

**Unit - II**

3. a) Explain foliage losses and propagation in near-in-distance. 7
- b) Explain point-to-point model with its equations. 7

OR

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- a) Explain the design aspects and merits of an omnidirectional antennas in cell site. 7
- b) What is known as directional antennas? Explain directional antennas for interference in detail. 7

**Unit - III**

1. a) What is umbrella-pattern effect? List the benefits of an umbrella cellular pattern. 7
- b) What is diversity receiver? Explain in detail. 7

OR

2. a) Define SINAD and WER. Explain what are subjective test and objective test? 7
- b) Write short notes on 7
  - (i) Crosstalk
  - (ii) Beam Tilting

**Unit - IV**

3. a) What is non-fixed channel assignment? Explain different types of non-fixed channel assignment algorithms. 7
- b) Explain channel sharing and borrowing in detail. 7

OR

4. a) Enlist and explain different types of handoffs in cellular systems. 7
- b) Explain What is Mobile Assisted' Handoff (MAHO)? 7

**Unit - V**

9. a) Draw and explain the architecture of GSM. 7
- b) Enlist and explain different GSM channels. 7

OR

10. Write short notes on (any two): 14
  - a) CDMA
  - b) PDC
  - c) PCN
  - d) PCS

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