

**Code: 9A04801****R09**

B.Tech IV Year II Semester (R09) Regular &amp; Supplementary Examinations April 2016

**CELLULAR & MOBILE COMMUNICATIONS**

(Electronics &amp; Communication Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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- 1 (a) Explain basic cellular system.  
(b) Explain the operation of cellular system.
- 2 (a) Explain how to determine desired C/I from a normal case in a Omni directional antenna system.  
(b) What is cell splitting? Explain the types of it.
- 3 (a) Write about real time co-channel interference.  
(b) Write a note on diversity receiver.
- 4 Derive the expression of general formula for mobile propagation over water and flat open area.
- 5 (a) Explain the concepts of channel sharing and channel borrowing with an example.  
(b) Explain the need for sectorization. What are the types of sectorization?
- 6 (a) Explain the sum and difference patterns and their synthesis.  
(b) What are the constraints in maintaining minimum separation of cell site antennas?
- 7 Write short notes on the following:  
(a) Forced handoff.  
(b) Mobile assisted handoff.  
(c) Intersystem handoff.
- 8 (a) Write about GSM channels.  
(b) Explain the differences between TDMA and CDMA.

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