

**(DEC 423)**

**B. Tech. DEGREE EXAMINATION, MAY - 2015**

**(Examination at the end of Final Year)**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

**Paper - III : Mobile and Cellular Communication (Waves)**

**Time : 3 Hours**

**Maximum Marks : 75**

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**Answer question No. 1 compulsory**

**(15)**

**Answer ONE question from each unit**

**(4 x 15 = 60)**

- 1) a) Draw the block diagram of cellular system.
- b) List the important cellular concepts.
- c) What is the need for cell splitting.
- d) What are the three basic propagation mechanism?
- e) What is frequency diversity?
- f) Explain Doppler shift.
- g) List the differences between wireless and fixed telephone networks.
- h) Classify the GSM channels.

**Unit - I**

- 2) a) Explain concept of frequency Reuse channels.
- b) Explain the major elements in the Cellular Mobile Radio System Design.

**OR**

- 3) a) Explain basic cellular system with neat diagram.
- b) Explain paging system with neat block diagram.

## **Unit – II**

- 4) a) Explain different types of small scale fading.  
b) Discuss time diversity reception.

OR

- 5) a) Explain fading effects due to multipath time delay.  
b) Explain the structure of linear transversal equalizer with neat sketch.

## **Unit – III**

- 6) a) Explain GSM architecture.  
b) Discuss Base Station in GSM.

OR

- 7) a) Write short notes on GSM short message services.  
b) Explain Architecture of IS-95 with neat sketch.

## **Unit – IV**

- 8) a) Explain WAP protocol.  
b) Explain functional groups of GRPS.

OR

- 9) a) Explain layering structure of CDMA 2000.  
b) Explain W-CDMA.

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