



# Govt. Women Engineering College, Ajmer

Department of Electronics and Communication Engineering

B. Tech (ECE) 7<sup>th</sup> Semester 2<sup>nd</sup> Mid Term Examination –October 2017

Subject: **Wireless Communication**

Subject Code: **7EC4A**

Time: 1 Hr.

Batch: **A**

Max. Marks: **20**

Student RTU Roll No.: .....

Date of Examination: 31/10/2017

**Note: The paper consists of four questions. Assume any missing data.**

- Q. 1.** What do you mean by small-scale propagation? Discuss the types of small-scale fading. [5]
- Q. 2.** Give the classification of multiple access techniques used in different wireless communication systems. Explain the TDMA scheme, its salient features, frame structures and frame efficiency. [5]
- Q. 3.** Assuming the speed of a vehicle is equal to 60 mph (88 ft/sec), carrier frequency,  $f_c = 860$  MHz, and rms delay spread  $\tau_d = 2$   $\mu$ sec, calculate coherence time and coherence bandwidth. At a coded symbol rate of 19.2 kbps (IS-95), what kind of symbol distortion will be experienced? What type of fading will be experienced? [5]
- Q. 4.** Explain the concept of rake receiver. Derive an expression for computing the performance and number of users in CDMA cellular system. [5]

**OR**

Discuss and explain the call processing and power control mechanism in CDMA systems. [5]

**ALL THE BEST**



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