Govt. Women Engineering College, Ajmer
Department of Electronics and Communication Engineering

B. Tech (ECE) 7th Semester 1st Mid Term Examination –September 2017

Subject: **Wireless Communication** Subject Code: **7EC4A**

Time: 1 Hr. Batch: **A** Max. Marks: **20**

Student RTU Roll No.: ……………………………….....… Date of Examination: 19/09/2017

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

Q. 1. Explain the concept of spread spectrum modulation. What are the operational advantages of spread spectrum modulation? Also explain spreading codes. **[5]**

Q. 2. A DSSS system has a 1.2288 megachips per second (Mcps) code clock rate and a 9.6 kbps information rate. Calculate the processing gain. How much improvement in information rate is achieved if the code generation rate is changed to 5 Mcps and the processing gain to 256? **[5]**

Q. 3. Explain the Frequency Hopping Spread Spectrum (FH-SS) system with block diagram and find the expression for processing gain in FHSS systems. **[5]**

Q. 4. Define the free-space propagation path loss and derive an expression of free space loss path loss. Make suitable assumptions as necessary. **[5]**

OR

Explain the basic propagation mechanisms. Discuss the Fresnel zone geometry and find the radius of nth zone. **[5]**

---**ALL THE BEST**---