**Rajasthan Institute of Engineering & Technology, Jaipur**

***SET- A***

**I- Mid Term examination**

**Session: 2018-19**

**SEM: VII BRANCH:- ECE**

**Subject: - WC (7EC4A)**

Time: 2hrs. M.M.:20

**Instruction for students:**

1. No provision for supplementary answer book.

Q.1 What is microwave link? Discuss various parameters which affect the design of microwave link.

Or

Q.1 Explain the DSSS with binary phase shift keying and compare its performance with FHSS

Q.2 What are the effects of the earth’s curvature on light of sight propagation?

Or

Q.2 Explain the transmitter and receiver block diagram of Microwave link.

Q.3. Explain the fading concept in wireless communication system and also discuss multipath fading in wireless system.

Or

Q.3. Two aircrafts are flying at altitudes of 3000 m and 4000 m respectively. What is the maximum possible distance over which they can have effective point to point communication?

Q.4. Describe the different propagation mechanisms and propagation modes used in wireless communication.

Or

Q.4 Write short note on Fresnel zone clearance.

**Rajasthan Institute of Engineering & Technology, Jaipur**

***SET- B***

**I- Mid Term examination**

**Session: 2018-19**

**SEM: VII BRANCH:- ECE**

**Subject: - WC (7EC4A)**

Time: 2hrs. M.M.:20

**Instruction for students:**

1. No provision for supplementary answer book.

Q.1 What is LOS communication? Discuss free space loss and its effects on LOS microwave communication. Prove that free space loss for ideal isotropic antenna is

20 log10 (f) +20 log10 (d) - 147.56 dB.

Or

Q.1 Compare FHSS with DSSS

Q.2 Describe various fading systems and fading multipath channels.

Or

Q.2 Define the phenomenon diffraction with Fresnel zone geometry and find the radius of nth zone.

Q.3. Write short notes on Propagation Modes.

Or

Q.3. What is ISM band? Explain in detail. Also explain the bending of radio beams.

Q.4 Write the relative advantage of spread-spectrum technique and different modulation scheme for achieve it.

Or

Q.4 Calculate the path loss for a signal of frequency 800 MHz when the transmitter and receiver are 50 Km apart. A both the transmitting and receiving antenna gains are 30 db each. If the transmitted power is 50 dBW, then calculate the received power.