University Institute OF Engineering and Technology

Class : ECE 1,2 Maximum marks : 30

Semester: 6th Time : 1:30 hrs.

Subject : Satellite Communication

Note:- All Questions are compulsory.

Q1 Explain the Trilateration method used in GPS system to locate a receiver. 5

Q2 Explain in detail the rain induced cross polarization interference. 5

Q3. Explain the method of C/A code generation in GPS system. 5

Q4. An earth station antenna has a diameter of 30m, has an overall efficiency of 68 % , and is used to receive a signal at 4150MHz. At this frequency the system noise temperature is 79K when the antenna points at the satellite at an elevation angle of 28 degrees. What is earth station G/T under these conditions? If heavy rain causes the sky temperature to increase so that the system noise temperature rise to 88K, what is the new G/T value? 5

Q5. (a) What do you mean by EIRP? 2.5

(b) An amplifier has a quoted noise figure of 2.5 db ,what is equivalent noise temperature. 2.5

(c) GPS application . 2.5

(d) Atmospheric absorption 2.5