

S.B. Roll. No.....

**COMMUNICATION SYSTEM**  
**4<sup>th</sup> Exam/ECE/6561/Jun'2022**  
**(For 2018 Batch Onwards)**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Give answer in one line.**

**15x1=15**

- a. What does AGC stands for?
- b. What is a point in the orbit of a satellite closest to earth?
- c. Which oscillator has maximum frequency stability?
- d. What are EM waves?
- e. Which propagation is also called duct propagation?
- f. What is value of intermediate frequency for FM receiver?
- g. What does VSWR stands for?
- h. Explain Pre-Emphasis.
- i. The director in a Yagi antenna is shorter than the driven element. (True/False)
- j. What is the height of a geostationary satellite from the surface of earth?
- k. What are units of Attenuation?
- l. Which mode of wave propagation is preferred for low frequency signal?
- m. The portion of atmosphere closest to earth is called ionosphere (True/False).
- n. What does FET stands for?
- o. Which orbit is used to put the remote sensing satellites?

**SECTION-B**

**Q2. Attempt any six questions.**

**6x5=30**

- i. Write down different applications of satellite communication system.
- ii. Explain a) Skip Distance b) Critical Frequency.
- iii. Explain indirect method of FM generation.
- iv. Explain working of Dish Antenna.
- v. With diagram, explain different types of earth orbit?
- vi. Explain multiple hop sky wave propagation.
- vii. Explain following characteristics of a radio receiver a) Selectivity b) Sensitivity.
- viii. Explain Radiation Pattern of an Antenna.

**SECTION-C**

**Q3. Attempt any three questions.**

**3x10=30**

- a. With diagram, compare sky-wave and ground-wave propagation.
- b. With block diagram, explain super-heterodyne receiver.
- c. Explain the following terms a) Bandwidth of an Antenna b) Directivity of an Antenna.
- d. What is temperature inversion? Also explain duct propagation.
- e. Explain satellite communication system with block diagram. Also write various advantages and disadvantages of satellite communication.