[Nov - 24]

**GITAM (Deemed to be University)**

**GST/GSS/GSB/GSHSS Degree Examination**

**III Semester**

**EECE2141 : TELECOMMUNICATIONS FOR SOCIETY**

**Time: 2 Hours** **Max. Marks: 30**

**Instruction:** All parts of the unit must be answered in one place only.

**Section - A**

**1. Answer all questions** **(5x1=05)**

a. What is meant by tip and ring? State the colors used to represent them.

b. What are the principles of cellular telephony?

c. What is M2M?

d. What are commonly used optical transmitters?

e. List out the satellite subsystems.

**Section - B**

**Answer the following** **(5x5=25)**

**UNIT - I**

2. Discuss the importance of data compression in reducing transmission time in facsimile systems.

**OR**

3. Explain Voice signal flow in VoIP systems.

**UNIT - II**

4. What is a vocoder, and why is it used in cell phone systems?

**OR**

5. What is the importance of an antenna in base station? Explain base stations by mentioning typical triangular cell site antenna.

**UNIT - III**

6. Analyze the advantages and limitations of different wireless technologies.

**OR**

7. Compare and contrast WiMAX and traditional mobile broadband technologies.

**UNIT - IV**

8. Explain the basic principles involved in fiber-optic cable.

**OR**

9. Explain the transmitter of dual polarization-QPSK for 100 Gbps.

## UNIT - V

10. Draw and explain dual-conversion down converters in receiver subsystems briefly.

**OR**

11. Describe the key components of a GPS receiver block diagram and explain the function of each component in the process of determining a user's location.