

CMR ENGINEERING COLLEGE: : HYDERABAD**UGC AUTONOMOUS****III-B.TECH-II-Semester End Examinations (Supply) - December- 2025****PRINCIPLES OF ELECTRONIC COMMUNICATIONS****(Common for CSE, IT, CSD, CSC)****[Time: 3 Hours]****[Max. Marks: 70]****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A**(20 Marks)**

1. a) What is modulation? [2M]
- b) What is the speed of light? [2M]
- c) Differentiate modulation and demodulation Processes [2M]
- d) What is the difference between PAM and PWM [2M]
- e) What is Geosynchronous satellite [2M]
- f) What is a VSAT? Where is it used? [2M]
- g) Define skew rays. [2M]
- h) What is index of refraction? [2M]
- i) What is Infrared Wireless? [2M]
- j) What is IEEE wireless standard for ZigBee. [2M]

PART-B**(50 Marks)**

2. Explain the Electromagnetic Spectrum with suitable sketches. [10M]
- OR**
3. Explain signal Gain, Attenuation, and Decibels. [10M]
4. Describe the two basic ways in which amplitude modulator circuits generate AM. [10M]
- OR**
5. Compare PSK and QPSK techniques. [10M]
6. Explain Satellite Communication Systems. [10M]
- OR**
7. Explain Satellite Ground Stations. [10M]
8. Explain Types of Fiber-Optic Cables. [10M]
- OR**
9. Explain various Light Sources with suitable sketches. [10M]
10. Explain various Cellular Telephone Systems. [10M]
- OR**
11. Analyze WiMAX and Wireless Metropolitan-Area Networks. [10M]
