

**III.B. TECH-II-SEM-I MID EXAMINATIONS Date: 08-03-2025 Time: 1:30 PM TO 03:30 PM**

**PRINCIPLES OF ELECTRONIC COMMUNICATION Branch: CSE/DS/IT/CS Marks: 30 SET-III**

***Note: Question paper contains two parts, Part - A and Part - B.***

***Part-A is compulsory which carries 10 marks. Answer all questions in part-A.***

***Part-B. Answer any FOUR questions out of SIX questions (4\*5=20 MARKS ).***

**PART-A 5\*2=10**

1. a) Define bandwidth. **CO1[BTL1 ]**

b) What is the formula for the sine wave modulating signals? **CO1 [BTL1]**

c) What is difference between PAM and PWM? **CO2 [BTL3]**

d) Define over modulation and distortion. **CO2 [BTL1]**

e) Draw the block diagram of communication system **CO1 [BTL6]**

**PART-B 4\*5=20**

2. Write short notes on

i) Gain ii) Attenuation iii) Decibels iv) Frequency translation  **CO1 [BTL3]**

3. Draw and describe the various frequency ranges in the electromagnetic spectrum with its

Applications. **CO1 [BTL2,6]**

4. Explain the generation of FSK wave with the help of block diagram. **CO2 [BTL2]**

5. Explain the generation of Amplitude Modulation (AM) wave with the help of block diagram. **CO2 [BTL2]**

6. Explain the block diagram of satellite communication system. **CO3 [BTL2]**

7. Explain the generation of PAM wave with the help of block diagram. **CO2 [BTL2]**

**SCHEME OF EVALUATION**

**Part –A**

| **SNO** | **THEORY** | **MARKS** | **TOTAL** |
| --- | --- | --- | --- |
| **1 a)** | Define bandwidth | **2** | **2** |
| **b)** | What is the formula for the sine wave modulating signals? | **2** | **2** |
| **c)** | What is difference between PAM and PWM? | **2** | **2** |
| **d)** | Define over modulation and distortion. | **2** | **2** |
| **e)** | Draw the block diagram of communication system | **2** | **2** |

**Part –B**

| **SNO** | **THEORY** | **MARKS** | **TOTAL** |
| --- | --- | --- | --- |
| **2** | Write short notes on  i) Gain ii) Attenuation iii) Decibels iv) Frequency translation | **5** | **5** |
| **3** | Draw and describe the various frequency ranges in the electromagnetic spectrum with its  Applications. | **5** | **5** |
| **4** | Explain the generation of FSK wave with the help of block diagram. | **5** | **5** |
| **5** | Explain the generation of Amplitude Modulation (AM) wave with the help of block diagram. | **5** | **5** |
| **6** | Explain the block diagram of satellite communication system. | **5** | **5** |
| **7** | Explain the generation of PAM wave with the help of block diagram. | **5** | **5** |