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221031

**3rd Semester/ ECE, ECE  
(For Speech & Hearing Impaired)  
Subject : Analog & Digital Communication**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 FM stands for \_\_\_\_.
- a) Frequency modulation
  - b) Frequency Modulator
  - c) Frequent Frequent Multiplier
  - d) Frequency Mixer
- Q.2 Data transmitted for a given amount of time is called \_\_\_\_.
- a) Noise
  - b) Power
  - c) Frequency
  - d) Bandwidth
- Q.3 Amplitude Modulation suffers from \_\_\_\_.
- a) Side band Suppression
  - b) Intra Pulse Modulation
  - c) Cross Modulation
  - d) Carrier Suppression

Q.4 Balance modulator is used to produce \_\_\_\_\_.

- a) DSB                                      b) VSB
- c) AM                                        d) SSB

Q.5 A PWM signal can be generated by

- a) An as table multi vibrator
- b) A monostable multi vibrator
- c) Integrating a PPM signal
- d) Differentiating a PPM signal

Q.6 A PAM signal can be detected using

- a) Low pass filter                      b) High pass filter
- c) Band Pass filter                    d) All pass filter

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 PAM is analog modulation. (True/False)

Q.8 PCM stands for \_\_\_\_\_.

Q.9 Byte = \_\_\_\_\_ bites

Q.10 Unit of frequency is \_\_\_\_\_.

Q.11 QPSK stands for \_\_\_\_\_.

Q.12 Write full form of FSK.

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### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Write short note on need for modulation.

Q.14 Write expression for an amplitude modulated wave.

Q.15 Compare ISB and VSB modulations.

Q.16 Compare FM and AM in communication systems.

Q.17 Write short note on FSK.

Q.18 Write short note on quantization.

Q.19 Explain Carson's Rule.

Q.20 Differentiate between analog and digital signals.

Q.21 Draw block diagram of QPSK modulator.

Q.22 Compare pre-emphasis and de-emphasis.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Draw basic block diagram of ASK. Explain working principle of Ask and write any three applications.

Q.24 Draw and explain the block diagram of digital and data communication.

Q.25 Write short note on :

- a) PAM                                      b) PPM

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