

S.B. Roll No.....

**PRINCIPLE OF COMMUNICATION ENGG**  
**3<sup>rd</sup> Exam/ECE/ECE-II/ETV/0615/0261/Nov'17**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Fill in the blanks.**

**1.5x10=15**

- a. SSB stands for \_\_\_\_\_.
- b. PPM stands for \_\_\_\_\_.
- c. Noise is \_\_\_\_\_.
- d. In AM, The value of  $m$  lies between \_\_\_\_\_.
- e. Synchronization is necessary for \_\_\_\_\_.
- f. In FM, more the frequency deviation, \_\_\_\_\_ the number of sidebands.
- g. Multiplexing is used to \_\_\_\_\_.
- h. In PCM, quantization noise depends on \_\_\_\_\_.
- i. In communication system, noise affects \_\_\_\_\_.
- j. In DSB-SC wave, \_\_\_\_\_ is suppressed.

**SECTION-B**

**Q2. Attempt any five questions.**

**5x6=30**

- i. What are the advantages of modulation?
- ii. Write a short note the frequency spectrum of AM wave.
- iii. Differentiate between DSB and SSB systems.
- iv. State sampling theorem.
- v. Explain the working principle of diode detector.
- vi. Explain the principle of Delta modulation.
- vii. What are multiplexing and its types?

**SECTION-C**

**Q3. Attempt any three questions.**

**3x10=30**

- a. Explain the block diagram of a basic communication system with the help of diagrams.
- b. Explain the principle of operation of Armstrong method for FM generation.
- c. Write a short note on:
  - i. Pulse amplitude modulation
  - ii. Pulse width modulation.
- d. Explain working and principle of Ratio Detector.
- e. What is Amplitude Modulation? Derive an expression for AM wave.