Roll No…….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

B. Tech. (EE) (Semester – 5th)
FUNDAMENTALS OF ELECTRONIC COMMUNICATION SYSTEMS
Subject Code: BECEO1001
Paper ID: [18OE111522]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a. Which modulation will be preferred between AM and FM for music transmission? Justify your answer.
b. How much power is saved by suppressing the carrier in DSB-SC?
c. What are the advantages of VSB?
d. What is the Effect of noise on angle modulation?
e. Differentiate between analog and digital signals.
f. Explain aliasing and how can we avoid it?
g. Give the significance of eye diagrams.
h. Give various types of Line Coding Schemes.
i. What are the disadvantages of delta modulation?
j. Explain envelope detector.

Section – B **(5 marks each)**

Q2. Draw and explain balanced modulator used in AM.
Q3. Derive the expression for Power distribution in angle modulated signal.
Q4. With the help of block diagram, explain PCM.
Q5. Briefly describe role of equalizer in line coding.
Q6. Explain Pulse Amplitude Modulation.

Section – C **(10 marks each)**

Q7. Derive the expression for AM. Also explain modulation index for AM.
Q8. Draw and explain pre-emphasis and de-emphasis in FM.
Q9. Explain general methods for derivation of power spectral density of a broad class of line coding scheme.