S. B. Roll. No…….

PRINCIPLES OF COMMUNICATION ENGINEERING
3rd Exam/ECE/4461/Dec'22
(For 2018 Batch Onwards)

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1Do ad directed: **15x1=15**

a. CDMA stands for _____.
b. Duplex communication is _____.
c. Value of m in AM ranges from _____to _____.
d. Companding is done in _____modulation scheme.
e. DSBSC stands for_____.
f. DPCM stands for _____.
g. FM discriminator changes FM signal into _____.
h. The process of transmitting two or more signals simultaneously on same medium is called _____.
i. IF in case of AM receiver is _____.
j. In FM modulating index is proportional to _____.
k. Noise immunity in FM is better than AM **(T/F).**
l. Balanced modulator generates SSBSC.**(T/F)**
m. Synchronization is required in FDM **(T/F).**
n. Bandwidth requirement of AM is more than FM **(T/F).**
o. TDM is preferred for digital signals **(T/F).**

SECTION-B

Q2. Attempt any six questions. **6x5=30**

i. What is the need of modulation?
ii. Explain the concept of Pre Emphasis.
iii. Compare FM and PM.
iv. Explain working principle of square law modulator.
v. Compare High level and low level modulation.
vi. Explain block diagram of super heterodyne receiver.
vii. Explain the basic concept of FDM transmitter in detail.
viii. Explain the concept of PLL?

SECTION-C

Q3. Attempt any three questions. **3x10=30**

a. Explain Armstrong method of FM generation.
b. What is the difference between AM and FM?
c. Explain block diagram of PCM in detail.
d. What is Amplitude Modulation? Derive expression for an Amplitude Modulated wave. What are applications of AM?
e. Write a short note on any two:
   i) Noise Triangle **ii)** Frequency Hopping **iii)** Carson rule