BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)
B. Tech. Sem - II Electronic & Communication : WINTER- 2022
SUBJECT : ELECTRONIC COMMUNICATION

Day : Monday | Time : 10:00 AM-01:00 PM

Date : 28-11-2022 | **W-24090-2022** | Max. Marks : 60

N.B :

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagram **WHEREVER** necessary.
4) Assume suitable data if necessary.

Q.1 **a)** Define Modulation and Demodulation. **[06]**

b) Explain necessity of Modulation. **[04]**

OR

Q.1 Define following with respect to communication system. **[10]**

i) Bandwidth **ii)** Wavelength

iii) Baseband Signal **iv)** Passband Signal

v) Baseband Transmission

Q.2 Explain twisted pair cable and co-axial cable in detail with diagram. **[10]**

OR

Q.2 **a)** Explain different types of propagation modes. **[06]**

b) Define: **[04]**

i) Optical Fiber Index Profile

ii) Numerical Aperture

Q.3 Explain wireless communication with different propagation methods. **[10]**

OR

Q.3 Write short note on: **[10]**

i) Internet of Things

ii) Necessity of Modern Communication

Q.4 Define noise temperature and noise figure. Also derive the relation between noise figure and temperature. **[10]**

OR

Q.4 Explain shot noise and transit time noise. **[10]**

Q.5 **a)** Define amplitude modulation, modulation index. **[04]**

b) Differentiate DSBFC and DSBSC techniques. **[06]**

OR

Q.5 Describe the generation of SSB wave using third method. **[10]**

Q.6 **a)** Describe the generation of pulse amplitude modulation signal. **[06]**

b) Explain sampling process. **[04]**

OR

Q.6 Make a comparison between PAM, PWM, and PPM modulation schemes. **[10]**

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