

B.Tech. (ECE) 4th Semester (G-Scheme)  
Examination, July-2022  
COMMUNICATION SYSTEM  
Paper- PCC-ECE-202-G

*Time allowed : 3 hours]*

*[Maximum marks : 75*

*Note : Question No. 1 is compulsory. Attempt five questions in all taking one question from each unit.*

1. (a) What is the need of modulation? 2.5
- (b) List the communication channels. 2.5
- (c) Define the noise figure. 2.5
- (d) Explain in brief the modes of communication. 2.5
- (e) What is channel capacity? 2.5
- (f) Define modulation index. 2.5

Unit - I

2. Explain in detail the digital communication system. Why it is more suitable for long distances? 15
3. (a) Explain the different type of noise in communication system. 8
- (b) Explain in brief the limitations of communication system. 7

**Unit - II**

4. Explain in detail the modulation and demodulation of SSB-SC. 15
5. (a) Discuss the generation of FM waves. 7
- (b) Explain the comparison between AM and FM. 8

**Unit - III**

6. (a) Explain the FM transmitter using reactance modulator. 8
- (b) Explain the effect of feedback on operation of transmitter. 7
7. Write short notes on:
- (a) Block diagram of radio receiver 7
- (b) Super heterodyne receiver 8

**Unit - IV**

8. Explain in detail the differential pulse code modulation transmitter and receiver. 15
9. Explain in detail the following:
- (a) Channel capacity of PCM system 8
- (b) Differential PSK 7