



B.Tech VI Semester Supplementary Examinations, July 2024

**Principles of Electronic Communications
(IT)**

Maximum Marks: 70

Date:30.07.2024 Duration: 3 hours

- Note:
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		CO	Bloom Tx
1	Define modulation and classify.	1	L1
2	What is meant by multiplexing and write its applications?	1	L1
3	Define Phase modulation.	2	L1
4	Write the advantages of digital modulation schemes.	2	L1
5	Explain the operation of a bridge	3	L1
6	Explain the operation of a NIC.	3	L1
7	Define ascending orbit and descending orbit.	4	L1
8	State the two main disadvantages of fiber optical cable.	4	L1
9	Discuss about infrared wireless technology.	5	L1
10	What are the functions of Mobile Station?	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)			
11	Draw and describe the various frequency ranges in the electromagnetic spectrum with its applications. 10M	1	L2
OR			
12	A. An amplifier has an input of 3mv and an output of 5v. What is the gain in decibels? 5M B. Explain the concept of frequency translation with suitable example. 5M	1	L2
13	What is PCM? Illustrate the PCM transmitter and receiver with a diagram. 10M	2	L2
OR			
14	A. Discuss about the spectra of PWM and PPM signals. 5M B. Compare the characteristics of AM with FM. 5M	2	L2
15	A. Explain the operation of a paging system using a block diagram. 5M B. State the general operation of a cordless telephone. 5M	3	L2
OR			

16	Discuss about Ethernet LANs in detail?	10M	3	L2
17	A. Explain about satellite sub systems. B. Write some applications of sub systems.	5M 5M	4	L2
	OR			
18	Explain about fiber optic communication system and write down the applications.	10M	4	L2
19	Draw the block diagram of a RFID tag and explain.	10M	5	L2
	OR			
20	A. Discuss the basic forms of UWB wireless and also different types of UWB modulations. B. Discuss WCDMA in detail.	5M 5M	5	L2