



Regulation R18

Subject code: 206EB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VI Semester Supplementary Examinations, February 2024

**PRINCIPLES OF ELECTRONIC COMMUNICATIONS
(CSE)**

Maximum Marks: 70

Date:17.02.2024 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	Draw the block diagram of a communication system?	1	L2
2	How Baseband transmission is different from broad band transmission?	1	L1
3	Define ASK and PSK?	2	L2
4	Define modulation index, and percentage modulation?	2	L2
5	List the advantages of LAN?	3	L1
6	Write about local loop in telephones?	3	L1
7	What is geometric shape of non-circular orbits?	4	L1
8	Explain the most common transmission media in an optical communication system?	4	L2
9	List the operating frequency ranges of ZigBee and the maximum data rates for each?	5	L1
10	Define personal-area network (PAN) and wireless local area network (WLAN)?	5	L2

Part-B

Answer All the following questions. (5X10M=50Marks)			
11	Define the terms Gain, attenuation and decibels. And explain their importance in communications, with examples? 10M	1	L2
OR			
12	Illustrate electromagnetic spectrum and clearly indicate all the bands. 10M	1	L2
13	A. Draw the block diagram of PCM system and explain. 5M B. Define PWM and explain the concept of PWM using relevant waveforms. 5M	2	L3
OR			
14	A. Explain the basic principle of frequency modulation. Also explain a method to generate FM signal. 5M B. Explain a method to demodulate AM signal. 5M	2	L2
15	A. Explain about electronic telephones. 5M B. Describe internet telephony. 5M	3	L2

	OR		
16	Explain briefly about internet hardware. 10M	3	L5
17	A. List the advantages and disadvantages of satellite communications. 5M B. Write some GPS applications. 5M	4	L4
	OR		
18	A. Explain types of fiber optic cables. 5M B. Mention some applications of fiber optic. 5M	4	L5
19	Define is RFID? Explain the most recent version of RFID standards? State the Operating frequency range, advantages and benefits. 10M	5	L3
	OR		
20	A. Identify the features, benefits, applications, and operation of ultra wide band (UWB). 5M B. Describe the access mode and modulation type used in the original version of Bluetooth 5M	5	L3