



Regulation R-18

Subject code: 206FA

# 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

(IT)

Maximum Marks: 70

Date:24.02.2024 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?	CO1	
2	How Baseband transmission is different from broad band transmission?	CO1	
3	Define ASK and PSK?	CO2	
4	Define modulation index, and percentage modulation?	CO2	
5	Mention the advantages of LAN?	CO3	
6	Write about local loop in telephones?	CO3	
7	What is geometric shape of non-circular orbits?	CO4	
8	Name the most common transmission media in an optical communication system?	CO4	
9	List the operating frequency ranges of ZigBee and the maximum data rates for each?	CO5	
10	Define personal-area network (PAN) and wireless local area network (WLAN)?	CO5	

### Part-B

Answer All the following questions. (10MX 5=50Marks)			
11	Define the terms Gain, attenuation and decibels and explain their importance in communications, with examples? 10M	CO1	
OR			
12	Illustrate electromagnetic spectrum and clearly indicate all the bands. 10M	CO1	
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	CO2	
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	CO2	
15	A. Explain about electronic telephones. 5M B. Describe internet telephony. 5M	CO3	
OR			

16	Discuss briefly about internet hardware. 10M	CO3	
17	A. Discuss the advantages and disadvantages of satellite communications. 5M B. Write some GPS applications. 5M	CO4	
	OR		
18	A. Explain types of fiber optic cables. 5M B. Mention some applications of fiber optic. 5M	CO4	
19	What is RFID? What is the most recent version of RFID standards? State the Operating frequency range, advantages and benefits. 10M	CO5	
	OR		
20	Describe the access mode and modulation type used in the original version of Bluetooth. 10M	CO5	