



Regulation R18

Subject code:206EB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, June/July 2023

**PRINCIPLES OF ELECTRONIC COMMUNICATIONS
(CSE)**

Maximum Marks: 70

Date:24.06.2023 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)

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

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
- OR
- 12 Illustrate electromagnetic spectrum and clearly indicate all the bands?
10M
- 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
- OR
- 14 Explain the basic principle of frequency modulation. Also explain a method to generate FM signal.
10M
- 15 A. Explain about electronic telephones.
10M
B. Describe internet telephony.
5M
- OR
- 16 Discuss briefly about internet hardware.
10M
- 17 A. Discuss the advantages and disadvantages of satellite communications.
5M
B. Write some GPS applications.
5M
- OR
- 18 A. Explain types of fiber optic cables.
5M

- B. Mention some applications of fiber optic. 5M
- 19 What is RFID? What is the most recent version of RFID standards? State the Operating frequency range, advantages and benefits 10M
- 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