



Regulation R18

Subject code: 206FA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, January 2023

PRINCIPLES OF ELECTRONIC COMMUNICATIONS

(IT)

Maximum Marks: 70

21-01-2023

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 Define modulation and classify?
- 2 What is meant by multiplexing and write its applications?
- 3 Define Phase modulation?
- 4 Write the advantages of digital modulation schemes?
- 5 Write about the operation of a bridge?
- 6 Write about the operation of a NIC?
- 7 Define ascending orbit and descending orbit?
- 8 State the two main disadvantages of fiber optical cable?
- 9 Discuss about infrared wireless technology?
- 10 What are the functions of Mobile Station?

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 Draw and describe the various frequency ranges in the electromagnetic spectrum with its applications.
10M
- 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
- 13 What is PCM? Illustrate the PCM transmitter and receiver with a diagram. 10M
- OR
- 14 A. Discuss about the spectra of PWM and PPM signals. 5M
B. Compare the characteristics of AM with FM. 5M
- 15 A. Explain the operation of a paging system using a block diagram. 5M
B. State the general operation of a cordless telephone. 5M
- OR
- 16 Discuss about Ethernet LANs in detail? 10M
- 17 A. Explain about satellite sub systems? 5M
B. Write some applications of sub systems? 5M
- OR
- 18 Explain about fiber optic communication system and write down the applications? 10M
- 19 Draw the block diagram of a RFID tag and explain? 10M
- OR
- 20 A. Discuss the basic forms of UWB wireless and also different types of UWB modulations? 5M
B. Discuss WCDMA in detail? 5M

