



B.E DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Sixth Semester

ELECTRONICS AND INSTRUMENTATION ENGINEERING

U18EIE0005: Wireless Sensor Measurement System

COURSE OUTCOMES

CO1: Describe the structure and configuration of various Buses used in transmission of DATA

CO2: Analyze the suitable wireless data for various application.

CO3: Explain the fundamental concepts of various wireless IEEE protocol.

CO4: Analyze the specification details for the Smart data transmission.

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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|---|-----|-------------------|
| 1. State the criteria involved in configuration and structure of computer based measurement system. | CO1 | [K ₁] |
| 2. Discuss Management interface functions used in linear configuration measurement system. | CO1 | [K ₂] |
| 3. Classify the functions of the PC in the measurement system | CO1 | [K ₃] |
| 4. Give the features of the USB | CO1 | [K ₂] |
| 5. Define the control line commands used in RS-232C interface. | CO2 | [K ₁] |
| 6. State the communication protocol for Power Line Communication (PLC) | CO2 | [K ₁] |
| 7. Sketch the functional diagram of smart sensor. | CO3 | [K ₃] |
| 8. Tabulate the Digital data transmission types in mobile telecommunications network | CO3 | [K ₃] |
| 9. Determine the working frequency band of Bluetooth communication used in measurement system. | CO4 | [K ₃] |
| 10. Define the IEEE-488 specification used in interface function | CO4 | [K ₁] |

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

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|-----|--|----|-----|-------------------|
| 11. | Express the types of universal serial bus and explain with the tree structure. | 16 | CO1 | [K ₃] |
| 12. | With necessary block diagram explain the Null Modem Measurement System with the RS-232C Interface. | 16 | CO2 | [K ₄] |
| 13. | Illustrate a measurement system used in oil and gas industry using PROFIBUS Interface System. | 16 | CO2 | [K ₄] |
| 14. | Explain in detail about GSM-Based Data Transmission | 16 | CO3 | [K ₂] |
| 15. | Illustrate the Structure / Architecture of the measurement system using IEEE-488 (IEC-625) interface. | 16 | CO4 | [K ₄] |
| 16. | How the VXI measurement system is configured using an external GPIB interface board using embedded computer? | 16 | CO4 | [K ₃] |
