Register Number:……..

B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2024

(Regulation 2018)

Fifth Semester

ELECTRONICS AND INSTRUMENTATION ENGINEERING

U18EIE0005: Wireless Sensor Measurement Systems

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)

1.	What are the two criteria essential for organization of information flow in measurement system?	CO1	[K_1]
2.	How RS232C and USB serial bus differ based on the measurement system usage?	CO1	[K_2]
3.	Why ARQ correction method is not possible in simplex transmission mode?	CO1	[K_2]
4.	Draw the functional diagram of a smart sensor.	CO4	[K_2]
5.	List the types of measurement systems with respect to wireless data transmission.	CO2	[K_2]
6.	How are mobile phones classified according to the capabilities of external digital data transmission?	CO2	[K4]
7.	How parallel transfer offers higher data rates than serial transfer?	CO3	[K_2]
8.	What is IEEE – 488 standard? What are its advantages?	CO3	[K_2]
9.	Draw the organization of a CAMAC measurement system.	CO4	[K_1]
10.	List the interface operation modes of IEEE 1284.	CO3	[K_1]

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

11.	a)	What is an Interface System? Describe about an interface bus and its functions.	10	CO1	[K_2]
	b)	List the features of the USB.	6	CO1	[K_1]

12.	a)	Enunciate in detail about the structure and types of Profibus measurement system?	10	CO4	[K_2]
	b)	What are the factors to be considered while designing a data transmission system over a power network?	6	CO4	[K_3]
13.		With neat block diagram, explain the radio modem-based measurement system.	16	CO2	[K_2]
14.		Elaborate about the GSM based distributed measurement systems with its HSCSD and SMS data transmission structure.	16	CO2	[K_2]
15.	a)	Describe the structure of measurement system with IEEE – 488 interface.	10	CO3	[K_2]
	b)	What are the interface functions in IEEE 488? Brief about them.	6	CO3	[K_2]
16.		Explain the structure of VXI measurement system, buses and control of VXI system.	16	CO4	[K_3]

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