P P SAVANI UNIVERSITY

Fifth Semester of B. Tech. Examination
December 2022
SEIT3022 Embedded System

25.11.2022, Tuesday   Time: 10:00 a.m. To 12:30 p.m.   **Maximum Marks: 60**

Instructions:
1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION – I

			CO	BTL
Q - 1	Define Following(Any Five)	[05]		
(i)	Microcontroller		2	1
(ii)	Microprocessor		2	1
(iii)	Code memory		3	1
(iv)	SFR		3	1
(v)	TMOD		3	1
(vi)	TCON		3	1
(vii)	LCD		3	1
Q - 2 (a)	Explain types of Memory of the 8051 Microcontroller.	[05]	2	2
Q - 2 (b)	Explain ACC, Rn ,PC, SP and DPTR.	[05]	2	2
	OR			
Q - 2 (a)	With a neat diagram explain 8051 microcontroller.	[05]	3	3
Q - 2 (b)	Explain with an example the different types of SFRs.	[05]	3	2
Q - 3 (a)	Identify the use of TMOD and TCON SFRs.	[05]	3	3
Q - 3 (b)	Explain different timer modes.	[05]	3	2
	OR			
Q - 3 (a)	Explain different types of addressing modes.	[05]	2	2
Q - 3 (b)	Create an instruction set to initialize and read a timer input.	[05]	3	5
Q - 4	Attempt any one/two.	[05]		
(i)	With the help of neat diagram explain the interfacing of Seven Segment display.		3	3
(ii)	Identify the differences between microprocessor and microcontroller.		2	3

SECTION – II

			CO	BTL
Q - 1	Define following(Any Five)	[05]		
(i)	IDE		1	1
(ii)	Arduino		1	1
(iii)	Data Pin		1	1
(iv)	SSD		1	1
(v)	Sensors		1	1
(vi)	DC Motor		1	1
(vii)	Keypad		1	1
Q - 2 (a)	With the help of neat diagram explain different components of Arduino Uno.	[05]	3	3
Q - 2 (b)	Explain the components of Sketch.	[05]	3	2
	OR			
Q - 2 (a)	Describe all the steps to install Arduino IDE.	[05]	3	3

Q - 2 (b)	Explain the steps to create a project on Arduino Uno.	[05]	3	2
Q - 3 (a)	Draw the circuit diagram of Keypad interfacing with Arduino Uno.	[05]	3	3
Q - 3 (b)	Write a program to print A to Z on LCD.	[05]	3	5
	OR			
Q - 3 (a)	Draw the connection diagram of LCD.	[05]	3	3
Q - 3 (b)	Write a program to print "hello world" on LCD.	[05]	3	5
Q - 4	Attempt any one/two.	[05]		
(i)	Explain in detail about Sensors.		3	2
(ii)	Draw the connection diagram of DC-Motor.		3	3

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CO: Course Outcome Number   BTL: Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create