Course Code & Course Title	:	and its Specialization) BECE204L & Microprocessors and Microcontrollers	Semester	:	Fall 2025-2026
			Slot	:	A1 + TA1
Faculty	:	Dr. SUBHASHINI N Dr. JOHN SAHAYA RANI ALEX Dr. VIGNESWARAN T Dr. CHITRA K Dr. M. JAGANNATH Dr. BERLIN HENCY Dr. SIVASUBRAMANIAN A Dr. VYDEKI D Dr. RICHARDS JOE STANISLAUS Dr. HARIHARAN Dr. SUHASINI S Dr. MOHAMMED AARIF K O	Class Number	:	CH2025260102157 CH2025260102160 CH2025260102163 CH2025260102166 CH2025260102169 CH2025260102172 CH2025260102157 CH2025260102174 CH2025260102176 CH2025260102179 CH2025260102182 CH2025260102184 CH2025260102188
ation	:	90 Minutes	Max. Mark		50

neral Instructions:

- Write only your registration number on the question paper in the box provided and do not write other information
- Only non-programmable calculator without storage is permitted

Answer all questions

Q. No	Sub Sec.	Description	Marks	CO	BT Level
1		Consider a water level control system in an overhead tank. This system monitors the water level of the tank and automatically switches ON the motor whenever tank is empty. The motor is switched OFF when the overhead tank is FULL. Here, the water level of the tank is indicated on LCD (Liquid crystal Display). Draw the block diagram of the above system with necessary modules and peripherals required if the system is implemented using (a) Microprocessor and (b) Microcontroller	5	1	K1
2		Fill in Table 1 by specifying the values in the internal RAM locations and registers after the execution of each instruction of the following program. Table 1	10	3	K2

Program	Value
ORG 0000H MOV A, #27H	
MOV R0, #22H	
SUBB A, R0	
ANL A, R0	

			MOV 22H, A				
			SETB 69H				
			MOV 17H, @R0				
			MOV PSW, #10H				
			RR A				
			SWAP A				
			END				
3		Write an assembly language program for 8051 microcontroller to find the greatest of the five numbers stored from RAM location 50H. Store the result in 40H.			10	3	K3
4		Write an assembly language program for 8051 microcontroller to make a subroutine that will generate a delay of exact 1 ms. Use this delay to generate a square wave of frequency 0.25 kHz at P2.4. Assume that the crystal frequency is 11.0592 MHz. (Note: Do not use Timer)			10	4	K3
5		Write an assembly language program for 8051 microcontroller to check and transmit the bank account balance status serially at a baud rate of 9600. Assume the bank account balance is stored as an 8-bit hexadecimal value ranging from 00H to FFH, where, • 00H represents a zero balance. • Any value from 01H to FFH represents a non-zero balance. The account balance is input via Port P3 of the 8051 microcontroller. If the account balance is 00H, transmit the message "Nil Balance" serially, otherwise send the actual balance amount to Port P1. Assume the crystal frequency is 12 MHz.			15	4	K3

**********All the best **********