Sanjay Ghodawat University, Kolhapur

2020-21

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EXM/P/09/00

Year and Program: T.Y. B. Tech.	**School of Technology**	**Department: Electrical Engineering**
Course Code: ELE 307	**Course Title: Microcontroller & IoT**	**Semester : V**
Day : Monday **Date : 28/12/2020**	**End Semester Examination**	**Time : 2 Hrs.** **Max Marks : 50**

Question Paper

Instructions: 1) All Questions are compulsory.

		Marks	Bloom's Level	CO
Q.1	**Answer the following (any two)**–			
a)	Explain the internal memory organization of 8051 with memory map.	8	L2	CO1
b)	Draw and summarize the format of TMOD SFR and find the value to configure Timer 1 in counter mode, should operate in mode 2 and should be software controllable.	8	L3	CO1
c)	With neat diagram, elaborate on the working of timer 0 in mode 0.	8	L5	CO1
Q.2	**Answer the following (any two)** –			
a)	Develop an assembly language program to find the checksum of 5 bytes of data stored in ROM memory address location starting from 40H.	8	L5	CO2
b)	Interface ADC 0809 to 8051 and write the steps for converting the analog signal.	8	L2	CO4
c)	Highlight the application of IoT in home automation.	8	L4	CO3
Q.3	**Answer the following (any two)** –			
a)	Explain the pins available on Arduino Uno board and also mention the features of ATmega328p microcontroller.	9	L2	CO3
b)	Explain the basic commands for related to IO pins of Arduino Uno board.	9	L2	CO3
c)	Explain the following instructions in detail with example **a)** MOVX @DPTR, A **b)** MOVC A, @A+DPTR **c)** JBC 2FH.7, back **d)** CJNE @R1, #80H, back **e)** DJNZ 55H, loop **f)** SETB P2.4	9	L2	CO2

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