

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL/MAY 2026***Fourth Semester**Electrical and Electronics Engineering***UEET24403 – MICROPROCESSOR AND MICROCONTROLLER***Regulations – 2024**Duration : 3 Hrs**Maximum : 100 Marks***PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	Name the registers used in 8085 microprocessor.	L1	1	2
2.	Mention the purpose of SID and SOD lines in 8085 microprocessor.	L1	1	2
3.	Differentiate between CALL instruction and JUMP instruction.	L2	2	2
4.	State the function of given 8085 instructions: JP, JPE, JPO and JNZ	L1	2	2
5.	List out the functions performed by 8251 USART.	L2	3	2
6.	How does the 8254 timer generate time delay in the stack of 8051 microcontroller?	L2	3	2
7.	What are the advantages of microcontroller based systems over microprocessor based systems?	L1	4	2
8.	Comment on SFR in 8051 microcontroller.	L2	4	2
9.	How does microcontroller read data from sensor?	L2	5	2
10.	Define Xbee module.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Explain the architecture of 8085 microprocessor with a neat block diagram.	L2	1	16
	Or			
	b i Discuss the various interrupts in 8085 microprocessor.	L2	1	8
	ii Sketch the timing diagram for opcode fetch machine cycle.	L2	1	8
12.	a Use various addressing modes of 8085 microprocessor to illustrate how each mode access data differently?	L3	2	16
	Or			
	b Implement a subroutine using the CALL instruction and show its return with the RET instruction.	L3	2	16

13.	a	Illustrate the architecture of 8255 Programmable Peripheral Interface with a neat block diagram.	L2	3	16
		Or			
	b	With a neat sketch explain the interfacing of Analog to Digital converter with 8085 microprocessor.	L2	3	16
14.	a	With functional block diagram, show the architecture of 8051 microcontroller and elaborate how data moves between CPU and RAM.	L3	4	16
		Or			
	b i	Illustrate the steps to implement full duplex serial communication with 8051 microcontroller.	L3	4	8
	ii	Show the timer operation using 8051 microcontroller with an example.	L3	4	8
15.	a	Apply and write program using 8051 microcontroller to rotate and control a stepper motor.	L3	5	16
		Or			
	b	Interpret how a 4 x 4 keypad is interfaced with 8051 microcontroller and how the key press detection works?	L4	5	16