UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, April/May 2018

Course: Microprocessor   **Semester: 4th**
Program: B.Tech(CSE+CL-LLB)
Time: 03 hrs.   **Max. Marks: 100**

Instructions: Attempt all questions

SECTION A

S. No.		Marks	CO
Q 1	Differentiate between absolute and linear select decoding?	4	CO3
Q 2	Define the two controlled data transfer methods in microprocessor?	4	CO3
Q 3	Define handshaking signal interfacing?	4	CO4
Q 4	Write functions and correct syntax of following instructions: a. CMP b. CMA c. INX d. ADI	4	CO2
Q 5	Mention the name and number of machine cycles required for following instructions: a. LDA 3000h b HLT	4	CO1, CO2

SECTION B

Q 6	Differentiate between the following: a. hardware and software interrupts b. vectored and non-vectored interrupts	10	CO4
Q 7	Under which addressing mode following instructions fall and give reasons: a. LXI H, 4599 b. HLT c. DAA d. DAD e. CMA	10	CO2, CO5
Q 8	Two hexadecimal numbers 24h and 16h are stored at locations 3200 and 3201.Multiply both the numbers and find the square root of the result and store the result in 3203?	10	CO2
Q 9	Explain the timer operation of 8155?	10	CO5

SECTION-C

Q 10	a. Explain the various modes of operators of 8279 keyboard/display interface unit? b. Draw the timing diagram of STA 3000. Mention the name and number of machine cycles taken by the mentioned instruction.	20	CO1, CO2, CO5
Q 11	What is the output of following code: MVI B, 00H MVI C, 08H MOV A, D BACK: RAR	20	CO1,CO2

	JNC SKIP		
	INR B		
	SKIP: DCR C		
	JNZ BACK		
	HLT		
	How many machine cycles and T states are required for this code. How are flags affected?		