

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2019

Course: Microprocessor and interfacing
Program: B.Tech Electronics and communication
Course Code: ECEG3002

Semester: Vth
Time 03 hrs.
Max. Marks: 100

Instructions:

SECTION A

S. No.		Marks	CO
Q 1	What are the functions and applications of octal bidirectional buffer 74 ls 245	5	CO1
2	Assume that the accumulator contains data byte 82 h and the instruction MOV C,A is fetched with opcode 4F h. List the steps in decoding and executing the instruction	5	CO2
3	What is pipelining ? explain with respect to Microprocessor 8086	5	CO1
4.	Explain the operation of programmable interrupt controller	5	CO4

SECTION B

5.	Sixteen bytes of data are stored in memory locations at 2250h to 225F h . Write an ALP to transfer entire block of data to new memory locations starting at 2270 h	10	CO2
6.	Write a program to count from 0-20h with a delay of 100ms between each count. After the count 20h, the counter should reset itself and repeat the sequence	10	CO1
7.	Explain the internal architecture of 80286 with the help of a block diagram	10	CO2
8.	Explain with the help of block diagram the architecture of an ARM 7 processor	10	CO3

SECTION-C

9	What are the input and output control signals of 8255 in mode 1?Design a interfacing circuit for connecting keyboard and printer with 8085 through 8255 in mode 1.. Use IO mapped IO scheme. Connect keyboard to port A and printer to port B. Use port C for handshaking signals. Use decoding logic of your choice which should be reflected in your interfacing diagram. Write initialization instructions and a printer subroutine to output characters that are stored in memory	20	CO3/4
10	How do you identify the port addresses of the control register and counters of 8254?consider an IO mapped IO scheme and address line A7 is connected via inverter to Chip select line of 8254.Write a program to Initialize the 8254 for counter 2 in mode 0 with a count of 50000(decimal).when the count reaches zero it should return to the main program. Write a main program to display seconds by calling the subroutine as many times as necessary.	20	CO3/4

