

Government College of Engineering, Aurangabad
(An Autonomous Institute of Government of Maharashtra)

B. E. (EEP) Examination

End Semester Examination NOV 2016

EE441 : Advanced Microprocessor and Microcontrollers

Time: Three Hours

Date:

Max. Marks: 60

16 NOV 2016

N.B:-

1. All questions are compulsory
2. Figures to the right indicate full marks
3. Assume suitable data if necessary and state it clearly
4. Use of non-programmable calculator is allowed

Q.1 Solve any three

- a. Explain the shift and rotate instructions of 8086. What is the logical code segment address corresponding to physical address 6A3F7 H? Assume that CS=5C00H. 10
- b. Explain with an example any three addressing modes of 8051 microcontrollers. Differentiate between assembler and Compiler 10
- c. Explain the following instructions of 8086 with examples 10
 - i. PUSH[DI+2]
 - ii. LEA SI, Table
 - iii. JMP DWORD PTR{BX}
 - iv. MUL BYTE PTR[BX]
 - v. ADC DI, 8000H
- d. Explain the block diagram of 8253. Explain the control word of 8253. 10
- e. Explain internal RAM organization of 8051. Explain the pin diagram of 8051. 10

Q. 2 Solve any two

- a. Write assembly language programme in 8086 to find out the factorial of number 10
- b. Explain the following instructions of 8051 10
 - i. MOVC A, @A+DPTR
 - ii. MOV @R0, #7FH
 - iii. XCH A, R3
 - iv. MOV P1, #05
 - v. ADD A, #35 h
- c. Explain the keyboard interfacing to 8086. 10

Q.5 Write short notes on any three (5x2)

- a. Difference between Von-Neumann and Harvard architecture
- b. Addressing modes of 8086
- c. Types of memory and interfacing