



C09-AEI-403

3413

BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2015
DAEIE—FOURTH SEMESTER EXAMINATION
MICROCONTROLLER AND ITS APPLICATIONS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List different ports available for serial communication.
2. Draw TMOD and TCON registers.
3. Draw the internal memory partition of 8051.
4. What is machine level programming?
5. Define execution cycle and instruction cycle.
6. Define assembly language.
7. Show the stack movement when CALL and RET instructions are used.
8. Explain the term debugging a program.

- * 9. Draw the control word register (CWR) of 8257.
10. List any three applications of 8051 microcontroller.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Distinguish between microprocessor and microcontroller.
12. Explain the conditional and unconditional jump instructions with examples.
13. Explain about the following :
- (a) MOV A,# data
 - (b) RLC A
 - (c) XRL A,R_n
 - (d) INC DPTR
 - (e) DJNZ R_n, rel addr
14. Write a program to find the largest of an array given at 81H to 8AH.
15. Explain the sequence of a program when subroutine is called and executed.
16. Draw the flow chart for a program to find the largest number of an array.
- * 17. Draw and explain about the functional block diagram of 8255.
18. Draw and explain the printer interface with 8051 microcontroller.
