



C09-AEI-403

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**BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2014
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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List any three differences between microprocessors and micro-controllers.
2. List the differences between counter and timer.
3. What is PSW?
4. Classify the instruction set.
5. List the addressing modes of 8051 microcontroller.
6. List any three logical instructions.
7. What is meant by debugging?

8. ^{*} List the difference between PUSH and POP.
9. State the concept of CWR.
10. Define step angle of a stepper motor.

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. Draw the PIN diagram of 8051 and describe each PIN.
12. What is an addressing mode? Explain various addressing modes of 8051 with examples.
13. Explain various conditional JUMP instructions with example.
14. Explain different dynamic debugging techniques.
15. Explain the use of DA instruction in BCD addition with suitable example.
16. Explain nesting and multiple-ending technique of sub-routine.
17. Draw the functional block diagram of 8259 and explain the function of each block.
18. Draw the schematic for interfacing 7-segment LED display with 8051 and explain.
