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4739**BOARD DIPLOMA EXAMINATION, (C-14)****MARCH/APRIL-2019****DECE - SIXTH SEMESTER EXAMINATION****ADVANCED MICRO CONTROLLERS****Time: 3 Hours]****[Max. Marks: 80**

PART-A

3x10=30M

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 simple sentences.

- 1) List any six features of PIC 16F877.
- 2) List the bit oriented instructions of PIC 16F877.
- 3) List any three Applications of PIC Micro Controller.
- 4) List the operating modes of ARM7
- 5) What is Thumb mode in ARM.
- 6) List any three arithmetic instructions of ARM7 processor.
- 7) Mention three applications of various versions of ARM.
- 8) What ia an Embedded system?
- 9) Define multi-processing and multi-tasking.
- 10) List three Types of RTOS.

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PART - B

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5X10=50M

- Instructions:** 1) Answer any **five** questions.
2) Each question carries ten marks.
3) The answer should be comprehensive and the criteria for valuation is content but not the length of the answer.

- 11) (a) Draw the pin diagram of PIC 16F877. 5M
(b) Explain Program memory and Data memory of PIC 16F877. 5M
- 12) Explain the following instructions of PIC 16F877 with suitable examples.
i) MOVWF f ii) COMF f,d iii) ADDLW k iv) GOTO k 10M
- 13) Draw and explain the interfacing of DC motor with PIC 16F877. 10M
- 14) Draw and explain Block diagram of PIC 16F877. 10M
- 15) (a) Compare CISC and RISC Architecture 5M
(b) Draw ARM Core Architecture 5M
- 16) (a) Compare the Different versions of ARM. 5M
(b) Explain Registers of ARM7 Processor 5M
- 17) Explain addressing modes of ARM7 Processor 10M
- 18) (a) Write a short note on Embedded firm ware 6M
(b) Compare Normal OS and RTOS 4M

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