C14–EC-605

4739

BOARD DIPLOMA EXAMINATION, (C–14)
OCT/NOV—2018
DECE—SIXTH SEMESTER EXAMINATION

ADVANCED MICRO CONTROLLERS

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 any six features of PIC16F877.

2. List the bit oriented instructions of PIC16F877.

3. What is the fuction of Watchdog Timer in PIC microcontrollers?

4. List the important features of ARM.

5. List the addressing modes of ARM7 processor.

6. What is thumb mode in ARM?

7. List any three application of ARM processors.

8. What is an Embedded System?

9. What is 'Process' in the Operating System Context?

10. Compare normal OS and RTOS.

PART–B

10×5=50

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

11. a) Draw the block diagram of PIC 16F877 microcontroller.

b) Write a short note on I/O ports of PIC16F877.

12. Explain the memory organization of PIC16F877.

13. Explain the following instructions of PIC 16F877:

a) *SUBLW k* b) *COMF f, d* c) *MOVF f, d*
d) *RRF f, d* e) *SWAPE f, d*

14. Draw and explain the interfacing of DC motor with PIC16F877.

15. Compare CISC and RISC architechtures.

16. Explain registers of ARM7 processor.

17. Explain arithmetic instructions of ARM 7 processor.

18. a) Draw the general block diagram of an Embedded System.

b) Write a short note on RTOS.

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