

**M.Sc. (Part-II) Semester-III (CBCS) Examination
ELECTRONICS**

3 ELE 3-ADVANCED MICROCONTROLLER AND EMBEDDED SYSTEM

Time : Three Hours]

[Maximum Marks : 80

N.B.:— (1) All questions are compulsory.

(2) All questions carry equal marks.

(3) Draw neat diagrams wherever necessary.

1. (A) Explain indirect addressing mode associate with the PIC. 4
- (B) Explain the following instructions with example :
 - (i) addlw
 - (ii) comf
 - (iii) movlw
 - (iv) go to. 8
- (C) What is genral purpose register file ? 4

OR

- (P) Describe the CPU registers of PIC in brief. 8
- (Q) What is Serial Programming ? 4
- (R) Explain the function of Timer. 4
2. (A) Explain the concept of RISC processor. 8
- (B) Explain any four instructions of Arm processor. 8

OR

- (P) Explain the various blocks of AVR controller. 8
- (Q) Explain the concept of hardware interfacing. 8
3. (A) What is the role of device drivers in the embedded system ? 8
- (B) Describe the various features of embedded system. 8

OR

- (P) Explain how interrupt servicing mechanism work in embedded system. 8
- (Q) What are the precautions taken during the selection of processor in the design of embedded system ? 8

4. (A) Describe the following terms :

(i) DMA

(ii) USB

(iii) PC

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(B) Explain the difference between static and dynamic RAM.

4

(C) What are the data convertors ?

3

OR

(P) Differentiate between Asynchronous and Synchronous communication.

6

(Q) Explain simplex, half duplex and full duplex data transmission.

6

(R) What are the different types of ROM used in embedded system ?

4

5. (A) Explain how the editor is different than Assembler.

8

(B) Explain the function of any microcontroller programmer.

4

(C) List and explain uses of logic analyzer.

4

OR

(P) What is universal programmed ?

5

(Q) Explain the development tool linker for embedded system

6

(R) Differentiate between simulation and compiler.

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