

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
SUMMER SEMESTER (JULY 2016) – B-Tech  
END TERM EXAM

COURSE CODE: 14B1WEC735

MAX. MARKS: 50

COURSE NAME: FUNDAMENTALS OF EMBEDDED SYSTEMS

MAX.TIME: 2 HRS

COURSE CREDITS: 3

1. (a) Write a program to get data from the SFRs of Port B. Add the value 5 to it and send it to SFRs of Port C.

(b) Show the status of the C, DC, and Z flags of PIC status register after the addition of 38H and 2FH in the following instructions :

MOVLW 38H

ADDLW 2FH

[5 + 5 = 10]

2. Explain the PIN diagram of ADC. Show its interfacing with 8051 microcontroller. [10]

3. (a) In choosing a microcontroller, how important is it to have multiple sources for that chip?

(b) Compare and contrast microcontroller systems with micro processor systems.

[5 + 5 = 10]

4. (a) Find the ROM memory address for PIC18F2220 with 4 KB.

(b) Differentiate between von Neumann vs. Harvard Architecture

[5 + 5 = 10]

5. Explain and find the number of bytes of the following instructions tasks :

• MOVLW 5H

• ADDLW 50H

• GOTO

• MOVFF

• MOVWF

[2\* 5 = 10]