

JAYPEE UNIVERSITY OF INFORMATRION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2015

B.Tech VII Semester

COURSE CODE: 14B1WEC735

MAX. MARKS: 15

COURSE NAME: Fundamentals of Embedded Systems

COURSE CREDITS: 3

MAX. TIME: 1 HR

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

- Q1. a) Give the differences between RISC and CISC architecture?
 b) Explain the term instruction level parallelism? Which type of processor architecture allows this?
 c) Show how the flags are affected in 8051 after executing following instruction:

```
MOV A, #0FH
```

```
ADD A, #0BH
```

- d) State the contents of registers after executing following code:

```
ORG 000H
```

```
MOV 22H, # 11
```

```
MOV A, #170
```

```
MOV R0, #34
```

```
XCHD A, @R0
```

```
SWAP A
```

```
END
```

- e) What is the role of program counter? [5]

- Q2. Why the ports of 8051 are not capable to drive the dc motor circuit? Draw the architecture for port 1 and explain how the port works for input and output configuration. [5]

- Q3. Write a program to generate delay of 600 μ s using 8051 microcontroller. Mention comments with each instruction used. [5]