

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATIONS-May-2023

B. Tech-VI Semester (ECE)

COURSE CODE (CREDITS): 18B1WCI735(3)

MAX. MARKS: 35

COURSE NAME: ARM Based Embedded System Design

COURSE INSTRUCTOR: Dr. Naveen Jaglan

MAX. TIME: 2 Hours

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*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

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- Q1. Explain different types of exceptions in ARM and how these exceptions are handled. Explain the procedure to handle multiple exceptions simultaneously. [CO-4,6: 2+2=4 Marks]
- Q2. How ARM 7 implements pipelining by overlapping various stages of an instruction cycle to improve the performance of processor. [CO-4,5; 3 Marks]
- Q3. Write an ARM assembly language program to examine a table for a match, store the entry at the end of the table if no match is found. [CO-2,3; 3 Marks]
- Q4. Write an ARM program to find the factorial of a number. [CO-2,6; 4 Marks]
- Q5. Write a program to arrange a series of 32-bit numbers in descending order. Use bubble sort algorithm for implementation. [CO-3,5; 4 Marks]
- Q6. Write a program to scan a series of 16-bit numbers to find out how many are negative. [CO-4,5; 4 Marks]
- Q7. Write a program to find the one's complement of a 16-bit variable. [CO-1,2; 3 Marks]
- Q8. Write ten differences between Intel 8051 and ARM LPC2148 microcontrollers. [CO-4,6; 4 Marks]
- Q9. With the help of an example explain following instructions of ARM 7 TDMI: UMLAL, STMEA and LDMFD. [CO-4,6; 3 Marks]
- Q10. Write a program to find the sum of first ten integer numbers (1 to 10). [CO-3,5; 3 Marks]