

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATIONS-2022

B. Tech-VI Semester (ECE)

COURSE CODE (CREDITS): 13B1WCI731(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. Write a program in Embedded C to display hexadecimal digits 0 to F on a 7 segment LED interfaced with ARM LPC2148. Use appropriate delay in between the different displays.

[CO-4,6: 5 Marks]

Q2. Interface a Buzzer with ARM LPC2148 and write a program in Embedded C to control buzzer (ON/OFF) using a push button switch.

[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 assembly language program to add an array of five 16-bit numbers and store the result in internal RAM.

[CO-2,4: 3 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: 5 Marks]

Q6. Write a program to scan a series of 16-bit numbers to find out how many are negative.

[CO-4: 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: 3 Marks]

Q9. Write a program to find the squares of numbers 1 to 10 using look up table approach and store the result into the memory.

[CO-1,6: 3 Marks]

Q10. Write a program to find the sum of first ten integer numbers (1 to 10). [CO-3,5: 3 Marks]