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PAPER CODE	U313-295-D- <del>EXE</del>
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December 2023 (ENDSEM) EXAM

TY (SEMESTER - I)

COURSE NAME: Embedded Processors Branch: E&amp;TC COURSE CODE: ETUA31205D

(PATTERN 2020)

Time: [1Hr. 30 Min]

[Max. Marks: 40]

(\*) Instructions to candidates:

- 1) Figures to the right indicate full marks.
- 2) Use of scientific calculator is allowed
- 3) Use suitable data wherever required
- 4) All questions are compulsory. Solve any one sub question from Question 3 and any two sub questions each from Questions 4,5 and 6 respectively.

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) What is the principle design guideline of ARM processor?	[2]	CO1	Understand
Q2	a) What is the method to use GPIO port of LPC2148?	[2]	CO2	Understand
Q3.	a) With the help of interfacing diagram write embedded C code to interface GLCD with LPC 2148.	[6]	CO3	Apply
	b) With the help of interfacing diagram write embedded C code to interface ADC with LPC 2148.	[6]	CO3	Apply
Q.4	a) Justify popularity of Cortex architecture for embedded system.	[5]	CO4	Analyze
	b) Appraise the role of CMSIS in lowering time to market.	[5]	CO4	Analyze
	c) Correlate the lower power consumption in cortex with available hardware support for the same.	[5]	CO4	Analyze
Q.5	a) With the help of features, articulate any three applications of LPC 1768 microcontroller.	[5]	CO5	Apply
	b) illustrate the interfacing of two-digit seven segment display with LPC 1768 to count numbers 00 to 99.	[5]	CO5	Apply
	c) comment on the strategies to use LPC 2148 in low power mode.	[5]	CO5	Apply

Q.6)	a) Elaborate any one-use case of multicore microcontroller.	[5]	CO6	Apply
	b) What is a multicore microcontroller? How to program them?	[5]	CO6	Understand
	c) Describe any five features of STM32H745 microcontroller	[5]	CO6	Understand