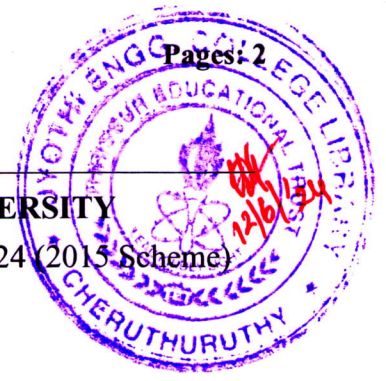Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Seventh Semester B.Tech Degree (S, FE) Examination May 2024 (2015 Scheme)

Course Code: MR405
Course Name: EMBEDDED SYSTEMS

Max. Marks: 100   Duration: 3 Hours

PART A
Answer all questions, each carries 5 marks.
                                                                 Marks

1   Memorize requirement form / requirement chart   (5)

2   Summarize on application specific instruction set processors   (5)

3   Appraise on sequential components   (5)

4   With an example explain A/D converters   (5)

5   Differentiate between static and dynamic memories   (5)

6   Differentiate between volatile and non-volatile memories   (5)

7   What are the features of real time operating system architecture?   (5)

8   What is the function of linker in the software development process   (5)

PART B
Answer any three full questions, each carries 10 marks.

9   Explain embedded system design processes steps in detail   (10)

10   Describe embedded systems on a chip (SoC) and use of VLSI circuits   (10)

11   Interpret
     a)   Steps involved to design a combinational circuit   (5)
     b)   Various combinational components   (5)

12   Summarize on
     a)   Instruction execution steps in detail   (5)
     b)   Pipelining process   (5)

13   a)   Design a counter that counts 0,2,4,6 using D-FF   (10)

PART C
Answer any two full questions, each carries 15 marks.

14   a)   What are the uses of timing and counting devices in an embedded system   (5)
     b)   Explain the function of watch dog timer   (5)
     c)   What is RTC? what are the function of RTC   (5)

15	a)	What is meant by BUS? What are the applications of BUS?	(5)
	b)	Explain any 3 types of serial buses used in embedded system	(10)
16	a)	What are the characteristics of round robin with interrupts architecture	(8)
	b)	Explain about the round robin software architecture	(7)
17	a)	What are the different embedded software development tools?	(5)
	b)	Explain different debugging techniques used in RTOS	(10)

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