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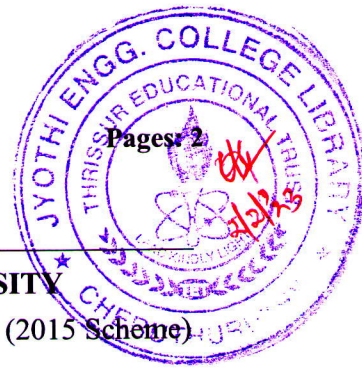
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Reg No.: _____

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Seventh Semester B.Tech Degree (S, FE) Examination January 2023 (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 Write a note on embedded systems	(5)
2 What is an interrupt in an embedded systems	(5)
3 Analyse the role of DSP in embedded system design	(5)
4 Identify the advantages and disadvantages of VLIW architecture.	(5)
5 Compare static and dynamic memory	(5)
6 Differentiate between volatile and non-volatile memories.	(5)
7 Explain about the function queue scheduling architecture of an embedded software	(5)
8 What are the different embedded software development tools?	(5)

PART B

Answer any three full questions, each carries 10 marks.

9 a) What are the processors in embedded system	(5)
b) Write the applications of embedded system	(5)
10 Explain the challenges in embedded system	(10)
11 With the help of an example, explain the various steps involved in the design of a combinational circuit	(10)
12 a) Elucidate embedded system on a chip, 'SoC'	(5)
b) Describe the technique pipelining	(5)
13 Draw the functional block diagram of embedded system and explain each block	(10)

PART C

Answer any two full questions, each carries 15 marks.

14 a) Differentiate between serial and parallel communications	(5)
b) What are the different types of memory modules used in embedded system?	(10)
15 a) Explain the function of I ² C Bus	(5)

- b) Explain the function of watchdog timer (5)
- c) Explain the function of parallel device ports (5)
- 16 Explain round robin scheduled algorithm with example (15)
- 17 a) Explain different Debugging Techniques used in Embedded Systems (8)
- b) Explain host and target system (7)
