



InSem Examination-I Winter 2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:I
Class:PG-I	Program:M.Tech
Branch Code:ETC	Pattern:2024
Name of Course:Embedded Product Design	Course Code:2402501
Max. Marks:30	Duration:1.15 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 1 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

- 1 a) Explain the need for embedded products in modern applications. Discuss how embedded systems have evolved to meet specific industrial and consumer demands with suitable examples. (7) 1

Question No. 2

- 2 a) Explain the process of partitioning and the criteria used to decide which functions should be implemented in hardware and which in software. (8) 1

OR

- 2 b) Discuss the iteration and refinement process in embedded product design. (8) 1

Question No. 3

- 3 a) Explain various models used for hardware development in embedded systems. Compare their key features and applications. (7) 2

Question No. 4

- 4 a) Describe the role of design methodologies in embedded system development. How do these methodologies improve reliability and time-to-market? (8) 2

OR

- 4 b) Explain the classification of processor technologies used in embedded systems. Give examples and applications of each type. (8) 2

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