



RV Educational Institutions
RV College of Engineering

Autonomous
Institution Affiliated
to Visvesvaraya
Technological
University, Belagavi

Approved by AICTE,
New Delhi

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Academic year 2022-2023 (Even Semester)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Date	12-7-2023	Maximum Marks	50
Course Code	22EM211	Duration	90 Min
Semester	II	CIE-1	
Introduction to Embedded Systems			

No	Questions	M	BT	CO
1	Describe the structure and functioning of embedded systems, providing a detailed explanation of how they work. Include a block diagram illustrating the components and their interactions within an embedded system. Additionally, provide examples of typical embedded systems and discuss their significance in various applications.	10	2	1
2	Compare and contrast microprocessors and microcontrollers, with a focus on their key differences. Additionally, discuss the role of microcontrollers in Arduino boards, highlighting their key features and provide examples of microcontrollers commonly used in Arduino boards.	10	2	1
3	Explain the functions and significance of memory, interrupts, power supply, clocks, and reset in the context of embedded systems?	10	1	1
4	Analyze the impact of choosing appropriate data types, utilizing functions effectively, and leveraging libraries in embedded system programming, considering factors such as memory utilization, code efficiency, and development productivity. Provide one example code for each concept and explain their significance.	10	3	2
5	Provide code examples and explanations to illustrate the concepts of arithmetic and logical operations in Arduino programming, highlighting their significance and demonstrating their implementation in practical scenarios?	10	3	2

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	30	20	--	--	--	20	30	--	--	--