



Sanjay Ghodawat University, Kolhapur

2017-18

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FY M Tech

EES 505

Nov 2017

8 DEC

School of Technology

Advanced Embedded Systems

End Semester Examination (ESE)

Semester I

Max Marks: 100

Time: 3 Hrs

- Instructions for Students:**
- 1) Use of non-programmable calculator is allowed
 - 2) All questions are compulsory

		Marks	COs
Q1	Solve any Two.		
a)	What is an Embedded System? Explain two types with their components and proper examples.	09	CO1
b)	Compare ARM7, ARM8, ARM9, ARM10, ARM11 Family.	09	CO1
c)	Explain ARM Processor modes along with its Nomenclature.	09	CO1
Q2	Solve any Two.		
a)	Explain Fundamental Components of Operating System.	08	CO2
b)	What is Firmware & Boot Loader? Explain its Execution flow.	08	CO2
c)	Explain the features of Red Boot firmware along with example of SANDSTONE Directory layout.	08	CO2
Q3	Solve any Two.		
a)	With neat diagram explain the Components of Virtual Memory System.	08	CO3
b)	Explain the different Methods of Protecting Memory Units.	08	CO3
c)	What is Cache? Explain with Memory Hierarchy and Architecture.	08	CO3
Q4	Solve any Two.	Marks	COs
a)	Explain with neat block diagram the LPC3250 single level NAND flash controller.	09	CO4
b)	List all features of LCD controller of LPC3250.	09	CO4
c)	Explain RUN mode, direct RUN mode and STOP mode of LPC 3250.	09	CO4
Q5	Solve any Two.		
a)	What is Special Function Register? Explain in detail.	08	CO5
b)	Explain Address space & Memory Map concept in MSP430 with neat diagram.	08	CO5
c)	Write a short note on Flexible Clocking System of MSP430.	08	CO5
Q6	Solve any Two.		
a)	List types of interrupts in MSP 430. Explain NMI interrupt handler with flow chart.	08	CO6
b)	Explain the following Emulated Instructions with its syntax and operation for Byte or Word, i) ADC ii) DEC iii) CLR iv) SETC v) DADC	08	CO6
c)	Explain block diagram of MSP430.	08	CO6

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