

# CBCS Scheme: 2015-16

## MODEL QUESTION PAPER

15 EI/BM/ML 663

### Sixth Semester B.E. Degree Examinations

## Embedded System Design and Programming

Time: 03 Hrs

Max. Marks: 80

Note: Answer FIVE FULL Questions, selecting ONE FULL Question from each Module

Question Number	Question	Marks Allotted
<b>Module -1</b>		
1	A) Define Embedded System. Explain the components of embedded system hardware with a neat block diagram.	08M
	B) With a neat diagram, explain the functional circuits in a microcontroller chip.	08M
OR		
2	A) Explain the Various forms of memories in the system.	08M
	B) With a neat block diagram, explain the process of converting C Program into ROM image file.	08M
<b>Module -2</b>		
3	A) Explain the 8051 instruction Set with an example for each.	08M
	B) Define Interrupt. Explain Interrupt sources with its addresses.	08M
OR		
4	A) Explain the specifications of counters and Timers.	08M
	B) Discuss Serial ports and data serial communication using SI in 8051.	08M
<b>Module -3</b>		
5	A) Explain Little Endian and Big Endian system in a Memory organization with an example.	08M
	B) Explain DMA with a neat block diagram.	08M
OR		

6	A) List and explain the types of RAM. B) Discuss the processor selection of case study of Automatic Chocolate Vending Machine.	08M 08M
	<b>Module -4</b>	
7	A) Define context switching. List and explain the actions of context switching. B) Discuss Interrupt Latency.	08M 08M
	OR	
8	A) Explain Exception handling with an example. B) Write a note on Recursion and Modularity.	08M 08M
	<b>Module -5</b>	
9	A) With a neat diagram, explain Petri Nets. B) Discuss Interrupt Service Routine.	08M 08M
	OR	
10	A) Discuss Coroutines with an example of C code. B) List the functions of RTOS.	08M 08M