Code: 20A04604b

R20

B.Tech III Year II Semester (R20) Regular Examinations August 2023

EMBEDDED SYSTEM DESIGN

(Electronics & Communication Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

*****

1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	Define embedded system.	2M
	(b)	Give the significance of embedded system.	2M
	(c)	What is piezo buzzer?	2M
	(d)	What is push button switch?	2M
	(e)	What is GSM?	2M
	(f)	What is USB?	2M
	(g)	What is super loop?	2M
	(h)	What is High level language?	2M
	(i)	Define message passing.	2M
	(j)	What is thread?	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	Explain in detail about the classification of embedded systems based on different criteria and give an example for each.	10M
	OR	
3	Explain about the embedded system design process.	10M
4	Explain about the seven segment LED in embedded system	10M
	OR	
5	Explain about various actuators in embedded systems.	10M
6	Explain the following: (i) SPI. (ii) CAN.	10M
	OR	
7	Define Bluetooth. Explain the different classes in Bluetooth	10M
8	Explain in brief about embedded firm ware development	10M
	OR	
9	Explain about the high level language based development in embedded systems.	10M
10	Explain about non pre-emptive and pre-emptive scheduling.	10M
	OR	
11	Describe the various Task Synchronization Techniques	10M

*****

Code: 20A04604b

R20

B.Tech III Year II Semester (R20) Supplementary Examinations January 2024

EMBEDDED SYSTEM DESIGN

(Electronics & Communication Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

*****

1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	What is System Integration?	2M
	(b)	List the applications of an Embedded system.	2M
	(c)	What is COT?	2M
	(d)	Give an example of ASIC.	2M
	(e)	Define Wi-Fi	2M
	(f)	What is ZigBee?	2M
	(g)	Define Firmware.	2M
	(h)	What is an Operating System?	2M
	(i)	What is RTOS?	2M
	(j)	Define Socket.	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	Define an Embedded System? Explain the characteristics of Embedded Systems.	10M
	OR	
3	Explain about Embedded System and General Computing System.	10M
4	What are the different types of memories used in Embedded System Design? Explain each with examples.	10M
	OR	
5	Explain about the different types of processors according to instruction set architecture.	10M
6	Write the classification of Communication Interfaces. Explain any one Communication Interface with example.	10M
	OR	
7	Explain in detail about the GPRS.	10M
8	What is an Operating Systems? List the different types of Operating Systems. Write short notes on embedded Operating Systems.	10M
	OR	
9	Explain about the Assembly Language based development in Embedded Systems.	10M
10	Explain the concept of Shared Memory in Task Communication.	10M
	OR	
11	Explain in detail, the different task Communication Synchronization issues encountered in Inter Process Communication (IPC).	10M

*****