



R20 Regulation

Subject code:307GA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Supplementary Examinations, December 2024

EMBEDDED SYSTEM DESIGN (CSM)

Maximum Marks: 70

Date:30.12.2024

Duration: 3 hours

- Note:
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20) Marks		CO	Bloom Tx
1	Classify the embedded systems?	1	L2
2	What are the components of embedded system?	1	L1
3	What is an ASIC?	2	L1
4	Differentiate microprocessor & microcontroller?	2	L2
5	Write the working principle of Relay	3	L3
6	Draw the diagram of I ² C	3	L1
7	Define Task Scheduling	4	L1
8	Write types of Operating Systems.	4	L1
9	Classify Task Communications.	5	L2
10	Write Message passing techniques.	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	Explain the different characteristics of embedded systems in detail?[10M]	1	L2
OR			
12	What is the operational quality attribute? Explain the important operational quality attributes to be considered in any embedded system design? [10M]	1	L2
13	What are the different types of memories used for program storage in embedded system design? [10M]	2	L1
OR			
14	Write a short note on a) Reset Circuit b)Oscillator Unit [10M]	2	L3
15	Explain the operation of matrix keyboard [10M]	3	L2
OR			
16	Explain the different on-board communication interface(Any two) [10M]	3	L2

17	Explain embedded firmware development languages in brief [10M]	4	L2
	OR		
18	Explain the various techniques need in mixing Assembly and High Level Language [10M]	4	L2
19	Explain RPC and Sockets in detail. [10M]	5	L2
	OR		
20	Explain Task synchronization issues. [10M]	5	L2