RGM COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)
10th April 2023
IV B.Tech. I Sem. (R19) End Examinations (Supplementary)
EMBEDDED SYSTEM & CONCEPTS
ECE

Time: 3 Hrs   **Total Marks: 70**

Note 1:Answer Question No.1 (Compulsory) and 4 from the remaining
    2:All Questions Carry Equal Marks

1a Define task and Task state.
 b List out the various building blocks of the hardware of an embedded system.
 c What is target system?
 d What does UART contains?
 e State the function of Arithmetic and logical unit.
 f What are the challenges of Embedded System?
 g Define Semaphore.

2   a) What is the advantage of running a processor at reduced clock speed in certain sections of embedded systems?   (7)
    b) What are the advantages and disadvantages of a processor with only fixed-point arithmetic unit?   (7)

3   a) Write a short note on MAC units at a processor in the system.   (7)
    b) Write the various forms of memories present in a system.   (7)

4   Explain the following machines with examples
    a) Target   (7)
    b) Host   (7)

5   a) Distinguish PCI and PCI-X bus.   (7)
    b) Write a short note on device driver.   (7)

6   a) Explain design metrics related to smart card.   (7)
    b) Draw and explain the smart card hardware block diagram.   (7)

7   a) Explain how critical section in handled by a pre-emptive scheduler.   (7)
    b) Explain the use of Semaphores for a Task or for the Critical Sections of a task.
                                                                                   (7)

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