Code No: **R194204H**　　　　**R19**　　　　Set No. 1

IV B. Tech II Semester Regular Examinations, April– 2023
EMBEDDED SYSTEMS
(Open Elective Except for Electronics and Communication Engineering)

Time: 3 hours　　　　　　　　　　　　　　　　　　　Max. Marks: 75

Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks
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UNIT I
1　a)　Define an Embedded system? Give the classification of embedded systems.　[8]
　　b)　What is Memory shadowing? What is its advantage?　[7]
(OR)
2　a)　Explain the sequence of Operations for communicating with a 1-Wire slave device.　[7]
　　b)　Discuss the Product Life-cycle curve of an embedded product development.　[8]

UNIT II
3　a)　What are the various parallel communication devices used in an Embedded Hardware? Explain any one of them.　[7]
　　b)　Explain the sequence of operation for communicating with an CAN Bus　[8]
(OR)
4　a)　Discuss in detail about 802.11　[7]
　　b)　Explain the role of Watchdog Timer in Embedded system.　[8]

UNIT III
5　a)　Explain the advantages and disadvantages of high-level language based embedded firmware development.　[7]
　　b)　List out the differences between an architecture specific device driver and ageneric device driver　[8]
(OR)
6　a)　What is interrupt? Explain its role in embedded application development　[7]
　　b)　Explain structure in the 'Embedded-C' programming context. Explain the significance of structure over normal variables.　[8]

UNIT IV
7　a)　What are the issues to be considered in Hardware software co-design? Explain　[7]
　　b)　Explain how thread and process are used in an embedded system　[8]
(OR)
8　a)　Explain how to choose an RTOS.　[7]
　　b)　Compare various Task scheduling algorithms in RTOS.　[8]

UNIT V
9　a)　Explain in detail about how testing will done on host machine.　[7]
　　b)　Explain in detail about below terms:　　i) Interpreters　　　ii) Compiler　[8]
(OR)
10　a)　List and describe the debugging tools used in an embedded system　[7]
　　b)　Discuss Simulators and Interpreters in detail.　[8]