**14CS/IT706 (14OE706/EC02)**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | | |
| **Jan / Feb, 2021** | **Common to CSE,ECE, EEE and IT** | | | |
| **Seventh Semester** | **Embedded Systems** | | |
| **Time:** Three Hours | | **Maximum :** 60 Marks | | |
| *Answer ALL Questions from PART-A.* | | | (1X12 = 12 Marks) | |
| *Answer* ***ANY FOUR*** *questions from PART-B.* | | | (4X12=48 Marks) | |
| **Part - A** | | | | |

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| 1 | Answer all questions | | (1X12=12 Marks) | | |
|  | a) | List the applications of an embedded system. | | |  |
|  | b) | What are RT Level sequential components? | | |  |
|  | c) | What is meant by pipelining? | | |  |
|  | d) | Differentiate models Vs languages. | | |  |
|  | e) | Define concurrent processes. | | |  |
|  | f) | What is FIFO? | | |  |
|  | g) | What is a semaphore? | | |  |
|  | h) | What is time slice? | | |  |
|  | i) | What are RS 232 data rates? | | |  |
|  | j) | What is automation? | | |  |
|  | k) | List various hand held operating systems. | | |  |
|  | l) | Define synthesis. | | |  |
| **Part - B** | | | | | |
| 2 | a) | What is design metric and explain about various design metrics? | | 8M | |
|  | b) | Describe tradeoffs. | | 4M | |
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| 3 |  | List various processor technologies and explain. | | 12M | |
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| 4 | a) | Briefly describe three computation models commonly used to describe embedded systems for each model list two languages that can be used to capture it. | | 6M | |
|  | b) | What is Bluetooth and explain in detail. | | 6M | |
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| 5 | a) | What is the need for communication interfaces? | | 4M | |
|  | b) | Write short notes on IEEE 802.11. | | 8M | |
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| 6 | a) | Write a short notes on architecture of kernel? | | 6M | |
|  | b) | Write short notes on Interrupt Service Routines | | 6M | |
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| 7 | a) | Explain about the task scheduling mechanism in detail? | | 6M | |
|  | b) | Explain Mutex, MailBoxes with suitable diagrams? | | 6M | |
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| 8 |  | What is priority inversion problem? Explain priority inheritance. | | 12M | |
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| 9 | a) | Write short notes on embedded operating system. | | 6M | |
|  | b) | Explain parallel evolution of compilation and synthesis. | | 6M | |

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