

M.E. Second Semester (Computer Science & Information Technology) (New-CGS)
13189 : Real Time Embedded Systems : 2 RNME 1

P. Pages : 2

Time : Three Hours



AW - 3877

Max. Marks : 80

- Notes :
1. All question carry equal marks.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Use of pen Blue/Black ink/refill only for writing the answer book.

1. What are different building blocks of the hardware in an Embedded System ? Explain with diagram. **13**

OR

2. a) Based on functionality and performance requirements, how embedded systems are categorized. **6**
- b) Explain the process of creating an executable image with diagram. **7**
3. a) Describe a various productivity tools to develop a software. **7**
- b) Explain the process of creating MIDlet. **6**

OR

4. a) Explain the waterfall model using diagram. **7**
- b) What are the different types of testing needs to be done; while testing the embedded system. **6**
5. a) Explain the architecture of Intel 8051 family micro-controllers. **8**
- b) Explain the need for communication interfaces. **6**

OR

6. a) Enlist and explain different specifications of the Bluetooth system. **7**
- b) Explain Infrared with IrDA module & protocol architecture. **7**
7. a) What are handheld operating systems? Explain any four popular handheld operating systems. **8**
- b) List the various objects of an operating system Kernel. Explain it. **6**

OR

8. a) What is task scheduling ? Explain the states of a task in an embedded system. **8**

- b) Explain the following : 6
i) Message Queues
ii) Priority Inversion problem.
9. a) Explain the software defined Radio transmitter architecture. 7
b) What are Smart Cards ? Explain. 6

OR

10. a) Enlist and explain the features of linux. 7
b) What is IP phone ? Explain. 6
11. a) What are the various phases in the process of development of DSP. Explain it. 6
b) Draw and explain RFID system in detail. 7

OR

12. a) What is the use of filtering in DSP ? List and explain its various types. 7
b) Explain the following : 6
i) Time domain analysis of digital signals.
ii) Frequency domain analysis of digital signals.
