



- Notes : 1. All questions carry equal marks.
2. Assume suitable data wherever necessary.

1. a) Elaborate concept of embedded system and its design with example. **8**
b) what is ARM write about ARM LPC2138. **8**

OR

2. a) What are embedded system design challenges. **8**
b) Classify embedded system and write its characteristics. **8**
3. a) Classify memory and write its features. **8**
b) How to select memory for embedded system explain. **8**

OR

4. a) Write types of memory allocation. **8**
b) Explain structural units in a processor in details. **8**
5. a) Explain following terms. **8**
i) Header ii) Source file
iii) Macros iv) Pre-processor directives.
- b) Explain the following. **8**
i) Functions ii) Data type
iii) Data structure iv) Modifiers

OR

6. a) Differentiate between assembly language and high-level language. **8**
b) Write different elements of embedded C programming language. **8**
7. a) Write characteristics of real time system. Give examples. **8**
b) What is kernel write characteristics of kernel. **8**

OR

8. a) Define and explain terms. 8
- i) Task scheduler ii) Interrupt service routines.
- b) Explain following terms. 8
- i) Semaphores ii) Mutex
- iii) Mailboxes iv) RMA
9. a) Elaborate and Write a Features of uCOS II. 8
- b) Explain kernel structure. 8
- OR**
10. a) Write about synchronization of processes. 8
- b) Define and explain tasks and threads. 8
