

Embedded System

P. Pages : 1

TKN/KS/16/7531

Time : Three Hours



Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is an embedded system ? Explain different characteristics of Embedded system. 7
b) Explain design metrics used in the embedded system. 7
OR
2. a) What are the challenges that arise during embedded system design process. 7
b) List any six application areas of embedded systems. Explain any one application in detail. 7
3. a) Explain hardware architecture of the embedded systems. 7
b) Explain processor selection for an embedded system. 6
OR
4. a) Explain memory organization in the embedded systems. 7
b) Explain interrupt Service mechanism. 6
5. a) Explain differences between RISC and CISC systems. 6
b) Explain various operating modes of ARM Processor. 7
OR
6. a) Explain ARM Processor nomenclature and core extension. 7
b) Explain ARM processor organization with neat diagram. 6
7. a) Write note on Bluetooth. 6
b) Explain IEEE 802.11 Protocol in detail. 7
OR
8. a) Write note on CAN Protocol. 6
b) Explain I2C Protocol. 7
9. a) Explain the function of Kernel and Task Scheduler in detail. 7
b) Explain the function of message queues. 6
OR
10. a) Explain Timer and Event function. 7
b) Explain the function of semaphores. 6
11. Explain case study of embedded system for Automatic chocolate vending machine. 14
OR
12. Explain case study of embedded system for digital camera. 14
