

Question Bank

UNIT 1:

1. Give the characteristics and constraint of embedded system? **Jun 14**
2. Explain the challenges in embedded computing system design. **Jun 14/Jan 14**
3. Define design methodology. Explain the embedded system design process? **Jun 14**
4. With a neat diagram, explain model train control system? **Jan 14**

UNIT 2

1. Differentiate between Harvard and von Neumann architecture. **Jun 14**
2. Define ARM processor. Explain advanced ARM features? **Jun 14**
3. What is pipelining? Explain the c55X of a seven stages of pipeline with a neat diagram of ARM instructions? **Jun 14/JAN 14**
4. With a neat diagram explain memory system mechanisms? **Jan 14**

UNIT 3

1. Write the major components of bus protocol. Explain the burst read transaction with a neat timing diagram? **Jun 14/Jan 14**
2. Describe: i) Timer ii) cross compiler iii) logic analyzer **Jan 14**
3. With a neat sketch, explain the glue logic interface? **Jun 14**
4. Explain components of embedded programs? **Jun 14**

UNIT 4

1. Write a note on DMA controller? **Jan 14**
2. Explain the circular buffers for embedded programs? **Jun14/Jan 14**
3. With a neat sketch, explain the role of assemblers and linkers in compilation process. .
Jun 14
4. Explain with example techniques in optimizing. **Jun 14/Jan 14**

UNIT 5

1. Explain operating system Architecture, with a neat diagram? **Jan 14**
2. Define different types of operating system? **Jan 14**
3. What is RTOS? List and explain the different services of RTOS. **Jun 14**
4. Describe the concept of multithreading and write the comparison between thread and process. **Jun 14**

UNIT 6

1. Define blocking and non blocking communication. Explain the two styles of interprocess communication, with a example. **Jun 14**
2. What are the assumptions for the performance of a real system running process? Mention the factors affect context switching time and interrupt latency. **Jun 14/Jan 14**
3. Explain shared memory communication implemented on a bus? **Jan 14**

UNIT 7

1. Explain hardware and software Architecture of distributed embedded system? **Jan 14**
2. Explain about multichip communication with a neat diagram? **Jan 14**
3. With a neat sketch, explain the CAN data frame format and typical bus transactions on the IC bus. **Jun 14**
4. Explain Ethernet format and IP structure. **Jun 14**

UNIT 8

1. Write a note on object file and map file. **Jan 14**
2. Explain about simulators, emulators and debuggers. **Jan 14**
3. What is simulator? Explain its features. **Jun 14**
4. What are the improvements over firmware software debugging? Explain **Jun 14**