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Code No: A7706

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I SEMESTER EXAMINATIONS, APRIL/MAY-2012
EMBEDDED SOFTWARE DESIGN
(EMBEDDED SYSTEMS & VLSI DESIGN)

Time: 3hours **Max.Marks:60**

Answer any five questions
All questions carry equal marks

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1. Explain the purpose of following pins on the Pentium processor.
   (a) $\overline{ADS}$, (b) $\overline{BE7} - \overline{BE0}$, (c) $D/\overline{C}$, (d) $\overline{PEN}$,
   (e) *INIT*, (f) $A_{31} - A_3$, (g) RESET, (h) $\overline{IERR}$

2. (a) Explain the factors to be taken into account in the selection of an appropriate RTOS.
   (b) Write short notes on run time libraries.

3. (a) Draw the diagram of tool based view of embedded design cycle.
   (b) What are the considerations for choosing the right microprocessor for an embedded application?

4. (a) Explain in detail about JTAG (IEEE 1149.1) protocol.
   (b) Explain the NEXUS standard giving its interface and dynamic debugging features.

5. (a) Explain the functional tests and coverage test methods.
   (b) Explain about performance testing in an embedded system.

6. (a) Explain about Directional buffer and circular buffer.
   (b) Write short notes on hardware / software partitioning.

7. Draw a schematic diagram of a debug kernel in a target system and mention the relative advantages and disadvantages of debug kernel.

8. Write short notes on
   (a) Memory leakage,
   (b) In-circuit emulator,
   (c) Logic analyzer

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