VT Oct 07 440

Con/5138-07.

BB-7434

(3 Hours)

[Total Marks : 100

N.B. : (1) Question No. **1** is **compulsory**.
      (2) Attempt any **four** out of remaining questions.
      (3) Make assumptions if any **clearly**.

1. (a) Explain "WRITE ONCE" policy as implemented in pentium processor with   **12**
      examples. (Assume that L2 cache is present).
   (b) Explain, with neat diagram, pentium state transitions.   **8**

2. (a) Explain, how communication of 8-bit device is accomplished with pentium.   **15**
      (Support your answer with neat diagrams). Also explain the working of read
      cycle.
   (b) Explain Functional Redundancy check feature of pentium.   **5**

3. (a) Draw the timing diagram of pipelined burst bus cycles of pentium.   **10**
   (b) Is the branch prediction useful ? Explain the working of the branch prediction   **10**
      logic in pentium.

4. (a) Explain Interrupt chaining process in PCI bus.   **10**
   (b) Draw and explain, PCI write transaction with wait states.   **10**

5. (a) Explain, how Green machine concept is achieved in PCI. (Give all the means).   **10**
   (b) Explain Reflected wave switching as applied to PCI bus.   **10**

6. Give some practical applications of RTOS. Explain how QNX satisfies the required   **20**
   features for RTOS.

7. (a) Explain various types of data transfers on USB.   **10**
   (b) Explain USB bus protocols.   **10**