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B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

December, 2015

BICSE-013 : REAL TIME SYSTEMS

Time : 3 hours   *Maximum Marks : 70*

Note : *Answer any **seven** questions. All questions carry equal marks.*

1. What is a translator ? Explain the different types of translators in detail with the help of examples. *10*

2. What is the significance of real time operating systems in today's world ? What are the different factors for selecting a real time operating system ? *10*

3. What is response time in a real time operating system ? Explain the response time specification on human interface. *10*

4. What is cost estimation ? Explain the different steps involved in cost estimation. *10*

5. What is Assembly Language Programming ? Explain the different passes used by the assembler to convert an assembly language program into machine code. *10*

6. What is a multiplexer ? How does a multiplexer differ from an encoder ? Explain in detail with the help of an example. *10*

7. What do you mean by loader and linker ? Give a brief description to link a high level program and a low level program with example. *10*

8. What is a computer clock ? Explain the three main components to create a clock. Explain the concept of a clock skew and clock tick. *10*

9. What is an interrupt ? Differentiate between maskable and non-maskable interrupts in detail. *10*

10. Write short notes on the following : $4 \times 2\frac{1}{2} = 10$

   (a) Basic Elements of Operating System

   (b) Testing of Software Model

   (c) Limitation of Assembly Language

   (d) Two State Actuator