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BICSE-013

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

Term-End Examination

00780

December, 2017

BICSE-013 : REAL TIME SYSTEMS

Time : 3 hours *Maximum Marks : 70*

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

1. Define the components of a real time system. Justify your answer with the help of suitable examples. *10*

2. What are the basic elements of operating systems ? Explain them. *10*

3. In contrast with real time systems, explain the concept of system software analysis and design. *10*

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

5. What do you mean by Loader and Linker ? Give a brief description to link a high level program and a low level program with the help of a suitable example. *10*

6. What is Cost Estimation ? Explain the different steps involved in cost estimation. *10*

7. Explain and differentiate the following : *10*

   (a) Task scheduling and Task synchronization

   (b) High level and Low level languages

8. Explain the following : *10*

   (a) Execution time of a program

   (b) Bus system

9. What is a Sensor ? Explain. Also explain binary state support sensor. *10*

10. Write short notes on the following : *10*

    (a) Dual Slope Analog-to-Digital Converter

    (b) CPU and Memory Board