| BICSE-001 |

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

Term-End Examination

December, 2014

00315

BICSE-001 : EMBEDDED SYSTEM

Time : 3 hours   *Maximum Marks : 70*

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

1. (a) What are the different gates ? Explain with truth tables and diagrams.   *5*

    (b) Draw the timing diagram for a ROM and explain it.   *5*

2. (a) Draw and explain the interrupt hardware.   *5*

    (b) Define volatile keyword. How does disabling interrupts affect system response ?   *5*

3. (a) Differentiate between micro-processor and micro-controller.   *5*

    (b) Write a short note on memory system design.   *5*

4. (a) State and explain the priority levels for round robin architecture.   *5*

    (b) Define function queue scheduling and explain the architecture.   *5*

5. (a) How many tasks are present in data RTOS ? Explain with diagram. *5*

(b) What is a semaphore ? What are the operations used by semaphore ? *5*

6. (a) What are the timing services in RTOS ? *5*

(b) Compare and contrast the methods for inter task communication. *5*

7. (a) Explain the concept of Hard real-time scheduling considerations. *5*

(b) What are the different ways for saving memory space ? *5*

8. Write short notes on the following :

(a) RTOS scalability *5*

(b) Compiler selection *5*

9. (a) Explain the rules followed by cross-compilers, cross-assemblers and tool chains. *5*

(b) Draw the diagram for tool chain for building embedded software. Explain. *5*

10. (a) Draw the schematic edge view of a socket. Explain. *5*

(b) What is flash memory ? Write the characteristics of flash memory. *5*