| BICSE-001 |

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

Term-End Examination □□224
June, 2015

BICSE-001 : EMBEDDED SYSTEM

Time : 3 hours   *Maximum Marks : 70*

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

1. (a) Write the truth table for a three-input AND gate. 5

   (b) What is hardware and software partitioning ? Explain. 5

2. (a) What are the signals present in Microprocessor ? Explain with a neat diagram. 5

   (b) What is DMA ? Draw the architecture of DMA. 5

3. (a) Differentiate between RISC and CISC processor architectures. 5

   (b) Write a short note on system optimization. 5

4. (a) Describe the characteristics of the Round Robin with interrupts architecture. 5

   (b) Define RTOS. What are the priority levels for RTOS architectures ? 5

5. (a) Discuss the task states in RTOS. Explain with neat sketch.   5

    (b) What are the problems in semaphore ?   5

6. (a) Define intertask communication. What are the tasks in it ? Explain.   5

    (b) What are the rules in interrupt routines in RTOS ?   5

7. Write short notes on the following :

    (a) Encapsulating Semaphores   5

    (b) Encapsulating Queues   5

8. (a) How should the interrupt routines work ?   5

    (b) What are the RTOS performance metrics ?   5

9. (a) Give the differences between a native linker and a locator.   3

    (b) Draw and explain the process of building application software with native tools.   7

10. (a) Define ROM emulator. Explain with a neat diagram.   5

    (b) State and explain the file formats and creating object files.   5