BICSE-001

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

Term-End Examination

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June, 2018

BICSE-001 : EMBEDDED SYSTEM

Time : 3 hours   *Maximum Marks : 70*

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

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1. (a) Explain different gates with truth tables and diagrams.   *5*

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

2. (a) Discuss the characteristics of a ROM and explain it.   *5*

    (b) Describe the difference between Static RAM and Dynamic RAM.   *5*

3. (a) Discuss the criteria of selecting an architecture of a microprocessor.   *5*

    (b) Describe the architecture of a real time operating system (RTOS).   *5*

4. (a) Write the steps carried out by a microcontroller on the activation of an interrupt. 5

   (b) Compare the advantages and disadvantages of data transfer using serial and parallel port. 5

5. Explain the use of various software tools for the development of an embedded system. 10

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

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

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

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

8. (a) Explain the data transfer using direct access in embedded system. 5

   (b) Describe the features of USB and CAN buses. 5

9. (a) Explain the method for testing embedded software. *5*

(b) Discuss the objectives, limitations and shortcomings that arise in the testing of an embedded system code. *5*

10. Describe any *two* of the following : *2×5=10*

(a) Shared Data Problem

(b) Bus Handshaking

(c) CISC Processor

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