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BICSE-001

**B.Tech. – VIEP – COMPUTER SCIENCE AND  
ENGINEERING (BTCSD)**

**Term-End Examination**

**June, 2019**

00525

**BICSE-001 : EMBEDDED SYSTEM**

*Time : 3 hours*

*Maximum Marks : 70*

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

1. (a) Describe the architecture of a microprocessor with the help of neat diagram. 5
- (b) How does ISA bus architecture differ from PCI bus architecture? 5
2. (a) Explain Cross Compiler in detail. 5
- (b) What is Round Robin with interrupts? Draw and explain the Communication Bridge. 5
3. Write short notes on the following :
  - (a) RTOS Scalability 5
  - (b) Compiler Selection 5

4. (a) Why do we need timer functions in RTOS ?  
Briefly discuss how they are provided. 5
- (b) Discuss the difference between  
microprocessor and microcontroller. 5
5. (a) Design and implement EX-OR gate using  
minimum number of NAND gates. 5
- (b) Describe the difference between RTOS and  
Windows/Unix based OS. 5
6. (a) What are the different embedded file  
formats ? How can we create object files ? 5
- (b) How can we handle the trigger group of  
events ? Write the program. 5
7. Explain the different functions of embedded  
operating system. 10
8. Explain the embedded system life cycle with the  
help of block diagram. 10
9. (a) What is DMA ? Draw the architecture of  
DMA. 5
- (b) How should the interrupt routines work ? 5
10. Write short notes on the following :
- (a) Linker/Locator for Embedded Software 5
- (b) Time-slicing 5