

FACULTY OF ENGINEERING**BE 4/4 (ECE) I - Semester (Supplementary) Examination, May /June 2019****Subject: Embedded Systems (Elective-II)****Time: 3 Hours****Max Marks: 75****Note:** Answer all questions from Part-A & Any five questions From Part-B.**Part – A (25 Marks)**

1. Why do we use a loader in a computer system and a locator in an Embedded System? (3)
2. What is the role of RAM in an Embedded System? (2)
3. Write any 4 features of CISC and RISC Architectures (3)
4. Differentiate ARM mode and Thumb mode. (2)
5. What do you mean by plug and play devices? What are bus protocols of buses UART, RS232C, USB, CAN, Bluetooth and PCI that support plug and play devices. (3)
6. What is FireWire? What is the main purpose of FireWire? (3)
7. What are the functions of device programmer? (2)
8. Why do we use host system for most of the embedded system development? What are the software tools needed at the host? (3)
9. What is Cross-compiler? (2)
10. What is the use of target emulator and ICE.? (2)

PART – B (50 Marks)

11. (a) Define Embedded System. What are the classifications of Embedded Systems? (6)
(b) Explain about Embedded System – On-Chip. (4)
12. Explain about ARM core with the help a neat diagram and also explain about ARM Extension i.e., Coprocessor (10)
13. Explain any two of the following protocols (10)
i) I2C ii) CAN iii) USB
14. Explain about Embedded System design and Co-design issues in System Development Process. (10)
15. (a) Explain about the design process in embedded system. (4)
(b) An automatic Chocolate Vending Machine is to be designed in a project. What will be skills needed in terms of hardware and software engineers. (6)
16. (a) Explain about Embedded Software Development Tools. (6)
(b) Explain about logic Analyzer (4)
17. Answer any two (10)
i) PCI, PCI-X ii) ARM CPSR register iii) RTOS Characteristics
