



B.Tech.
(SEM VIII) THEORY EXAMINATION 2017-18
Embedded Systems

Time: 3 Hours**Total Marks: 100****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a) Draw the basic structure of embedded system?
 - b) How embedded systems can be divided?
 - c) What is sampling?
 - d) Define signal and its type?
 - e) What is Signal Conditioning?
 - f) What is signal processing?
 - g) What do you mean by embedded control?
 - h) Define Fault and their types?
 - i) Define Formal Verification?
 - j) What are the embedded processors?

SECTION B

- 2. Attempt any three of the following: 10 x 3 = 30**
- a) Explain the Application of Embedded system in daily life in detail?
 - b) Explain the Real time operating system issues in embedded system?
 - c) Explain Frequency spectrum with required diagram?
 - d) Explain the usage of encoding and flow control mechanisms?
 - e) Explain OSI protocol for real time systems?

SECTION C

- 3. Attempt any one part of the following: 10 x 1 = 10**
- a) Explain the characteristics and requirements of embedded systems?
 - b) Embedded systems are very useful. Justify
- 4. Attempt any one part of the following: 10 x 1 = 10**
- a) Describe timing and clocks in embedded system with relevant example?
 - b) Explain Task Modeling and management in embedded system?
- 5. Attempt any one part of the following: 10 x 1 = 10**
- a) Explain various communication strategies for embedded systems?
 - b) Discuss the concept of control hierarchy with neat block diagram.?
- 6. Attempt any one part of the following: 10 x 1 = 10**
- a) Explain Modeling and Characterization of Embedded Computation System?
 - b) Explain the process of digitization from ADC to DAC?
- 7. Attempt any one part of the following: 10 x 1 = 10**
- a) What is the minimum performance criterion, and why is it important in the design of fault-tolerant systems?
 - b) Explain the Trends in Embedded Processor?

