Printed Pages:01 **Sub Code: NEE-043/NEC803**

Paper Id: | 1 | 2 | 0 | 8 | 1 | 7 | **Roll No.** | | | | | | | | | | |

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 managementin 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 hierarchywith 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 thedesign of fault-tolerant systems?
b) Explain the Trends in Embedded Processor?