Printed pages: 01 **Sub Code:NEC802A**

Paper Id: **900113** **Roll No:** | | | | | | | | | | |

B. TECH.
(SEM-VIII) THEORY EXAMINATION 2018-19
EMBEDDED SYSTEM

Time: 3 Hours ***Total Marks: 100***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

a. What is an embedded system?
b. Write the use of processor in embedded systems.
c. What is meant by UART?
d. What are the characteristics of embedded system?
e. List the difference between ADC and DAC.
f. What is counting device?
g. Describe the various equipment used in embedded system.
h. Write a note on sampling?
i. Mention the need of encoding in embedded systems.
j. What is meant by status flag.

SECTION B

2. Attempt any *three* of the following: **10 x 3 = 30**

a. Mobile/handheld devices are examples of an embedded system. Justify.
b. What is role of microprocessor in embedded system?
c. What are the real time communication requirements?
d. What is requirement of embedded system in Electronics?
e. what is timer device? Explain its applications.

SECTION C

3. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Enumerate the issues of fault tolerance in embedded system.
(b) What are the Challenges in Embedded systems?

4. Attempt any *one* part of the following: **10 x 1 = 10**

(a) explain parallel, series and wireless communication.
(b) Discuss some applications of embedded systems.

5. Attempt any *one* part of the following: **10 x 1 = 10**

(a) what is the difference between general purpose processors and ASIP's?
(b) Explain control hierarchy in embedded control.

6. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Explain the software tools in designing of an embedded system. Explain the sophisticated interfacing features in device ports.
(b) Explain the operation of interrupt controllers in embedded system.

7. Attempt any *one* part of the following: **10 x 1 = 10**

(a) What is error detection and correction?
(b) Give the brief content of the following terms with necessary block diagrams.
(i) Signals (ii) Frequency spectrum (iii) Sampling

Dr. Nitin Agarwal | 17-May-2019 13:29:35 | 117.211.191.98

Dr. Nitin Agarwal | 17-May-2019 13:29:35 | 117.211.191.98