

Roll No.

24321

**B. Tech 6th Semester (ECE)
Examination – May, 2018**

MICRO CONTROLLER AND EMBEDDED SYSTEM

Paper : EE-308-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Question No. 1 is compulsory. Attempt one question from each Section.

1. Explain the following :

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|--|---|
| (a) CISC Vs RISC | 5 |
| (b) Pipelining | 5 |
| (c) Different addressing Modes of 8051 | 5 |
| (d) Classification of Embedded Systems | 5 |

SECTION - I

2. (a) Explain the different types of microcontrollers in detail. Also discuss about the embedded microcontroller. 10
- (b) Differentiate between Harvard V/S Princeton Processor architecture. 10
3. Explain the following features of microcontrollers :
- (a) Pin Diagram 7
- (b) Interrupts 7
- (c) Memory types 6

SECTION- II

4. Explain the following :
- (a) Addressing Modes 10
- (b) CPU registers 10
5. (a) What do you mean by PIC ? Explain with the help of architecture. 10
- (b) What do you mean by instruction ? Explain the different types of instruction sets used with taking suitable examples. 10

SECTION - III

6. Discuss the following :
- (a) Stepper Motor 10

- (b) Interfacing of microcontroller with LCD 10
7. What do you mean by Memory Organization ? How external addressing is done ? Explain. 20

SECTION - IV

8. (a) What do you mean by Embedded System ? Classify it. What are the different applications and product of Embedded systems ? 10
- (b) Discuss about the case study of an embedded system for a smart card. 10
9. Explain the following :
- (a) Structural units in Processor 10
- (b) Memory devices and I/O devices 10
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