

S.D.E.

M.C.A. Sem - IV : WINTER - 2018

SUBJECT : ELECTIVE – II: EMBEDDED SYSTEMS DESIGN & PROGRAMMING

Day : Friday
Date : 07/12/2018

W-2018-4813

Time : 02.00 PM TO 05.00 PM
Max. Marks : 80

N.B.:

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
 - 2) Answers to both the sections should be written in **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION – I

- Q.1** Discuss the various challenges involved in Embedded System Design. [10]
- Q.2** Explain the concept of “Development Platform” with respect to embedded systems. [10]
- Q.3** Discuss in detail the architecture of 8051 micro-controller. [10]
- Q.4** What is Assembly-Language? Briefly discuss its importance with respect to embedded systems. [10]
- Q.5** How 8051 micro-controller is interfaced with the external world? [10]
- Q.6** What is an operating system? Discuss with respect to embedded systems. [10]
- Q.7** Write short notes on **ANY TWO** of the following: [10]
- a) DAC
 - b) Programmable Logic Devices
 - c) MCS – 51 Kit

SECTION – II

- Q.8** Discuss the following components of an embedded system in brief: [15]
- a) Processor
 - b) Memory
- Q.9** Discuss in detail the design and programming of micro-controller based embedded systems. [15]
- Q.10** Write appropriate syntax and usage/purpose for following 8051 micro-controller instructions: [15]
- a) ADD
 - b) INC
 - c) JZ
 - d) PUSH
 - e) MOVX

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