Code : 15EC62T

Register Number | | | | | | | | | | |

VI Semester Diploma Examination, April/May-2019

EMBEDDED SYSTEMS

Time : 3 Hours] **[Max. Marks : 100**

Instructions : (i) Answer any **six** questions from Part – **A**. **(5 × 6 = 30** marks)

(ii) Answer any **seven** full questions from Part – **B**. **(7 × 10 = 70** marks)

PART – A

1. Define Embedded System and distinguish this from general purpose system. **5**

2. Explain the elements of Embedded system. **5**

3. Explain the role of Brown-out protection circuit in embedded system. **5**

4. List the features of MSP430. **5**

5. Explain the addressing modes of MSP430 microcontroller. **5**

6. Write MSP430 assembly program to light the LEDs. **5**

7. Explain MSP430 shift and rotate instructions. **5**

8. Differentiate between Non-interruptible I/O and interruptible I/O. **5**

9. Explain the use of comparator for capacitive touch sensing. **5**

[Turn over

PART – B

10. Explain the characteristics and quality attributes of Embedded system. **10**

11. Write note on sensors and actuators. **10**

12. Explain different external communication interfaces in brief. **10**

13. Explain the architecture of MSP430 microcontroller with block diagram. **10**

14. Explain memory mapping of MSP430 microcontroller. **10**

15. Explain Editor, Assembler/Compiler, Linker, Embedded Emulator/Debugger Flash Programmer. **10**

16. Explain layout of assembly language and coding guidelines for C. **10**

17. Explain MSP430 Timer-A with block diagram. **10**

18. Explain MSP LCD driver with control registers. **10**

19. Explain architecture and operation of MSP430 comparator-A with block diagram. **10**