

B.Tech. SEM -V Electrical 2014 Course (CBCS) : SUMMER - 2019

SUBJECT: MICROCONTROLLER

Day: Saturday
Date: 11/05/2019

S-2019-2663

Time: 10.00 AM TO 01.00 PM
Max. Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Use of non- programmable calculator is **ALLOWED**.
- 3) Figures to the right indicate **FULL** marks.
- 4) Draw a neat and labeled diagram **WHEREVER** necessary.
- 5) Assume suitable data, if necessary.

- Q1. a) Which are the various Microcontrollers widely used in industry nowadays. (05)
b) Explain the selection criteria of Microcontroller. (05)
OR
- Q1. a) Draw and explain PSW register. (05)
b) Differentiate between RISC and CISC architecture. (05)
- Q2. a) Write a short note on ROTATE and SWAP instructions (05)
b) Explain Stack related instructions. (05)
OR
- Q2. a) Explain following instructions with examples (05)
a) JNZ Rel
b) ACALL Label
b) Explain RAM organization of 8051. (05)
- Q3. Explain serial communication in detail with registers associated also explain various modes of serial communication of 8051. (10)
OR
- Q3. a) Draw and explain interrupt structure of 8051. (05)
b) Explain bit and byte level operations with examples. (05)
- Q4. Explain DC motor interfacing with 8051 to rotate clockwise and also draw diagram of interfacing. (10)
OR
- Q4. Explain application of Traffic light system with 8051 with a suitable diagram and program. (10)
- Q5. a) Explain the architecture of PIC Microcontroller (05)
b) Write a short note on addressing modes of PIC Microcontroller. (05)
OR
- Q5. a) Draw and explain CCP1CON register (05)
b) Write a short note on Simulator and Assembler (05)
- Q6. a) Explain in detail Interfacing of ADC with PIC Microcontroller. (05)
b) Explain the interrupt structure of PIC Microcontroller (05)
OR
- Q6. a) Explain the functions of various ports of PIC Microcontroller. (05)
b) Write the steps involved in receiving data serially. (05)

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