



C16/C16S-EE-405

5658

BOARD DIPLOMA SUPPLEMENTARY EXAMINATION, (C-16/C-16S)

DECEMBER - 2020

DEEE - IV SEMESTER EXAMINATION

DIGITAL ELECTRONICS & MICROCONTROLLERS

Time : 2 Hours]

[Total Marks : 80

PART - A

5×6=30

Instructions :

- (1) Answer any 06 questions.
- (2) Each question carries FIVE marks.
- (3) Each answer should not exceed more than ONE Page.

- 1 Draw OR Gate using NAND Gates.
- 2 Convert $(347)_8$ into binary number.
- 3 List the different types of registers.
- 4 State the functions of a Counter.
- 5 List the interrupts as per their priority.
- 6 List the features of 8051 Micro controller.
- 7 Define Instruction Cycle.
- 8 Compare assembly language and machine level languages in any three aspects.
- 9 Define Opcode and Operand.
- 10 Write a program to find the sum of two 8 bit numbers.

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[Contd...

PART - B

10×5=50

- Instructions :**
- (1) Answer any **FIVE** questions.
 - (2) Each question carries **TEN** marks.
 - (3) Each answer should not exceed more than **TWO** Pages

- ~~1~~ (a) Subtract 1100_2 from 1110_2 using 2's compliment method.
- (b) Explain EX-OR Gate with truth table and symbol.
- ~~2~~ Explain the working of 4 bit parallel adder using full adders.
- ~~3~~ Explain JK Master Slave flip flop with truth table.
- 14 Explain the working principle of 4 bit asynchronous decade counter with truth table.
- 15 Explain the timers and counters in 8051.
- ~~16~~ Explain the serial input / output ports of 8051.
- 17 Explain the data transfer instructions of 8051.
- 18 Write a program to find the sum of first 'N' natural numbers.

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