



C14-EC-405

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**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DECE-FOURTH SEMESTER EXAMINATION**

MICROPROCESSOR AND MICROCONTROLLERS PROGRAMMING

Time: 3 Hours]

[Total Marks: 80

PART-A

3X10=30

- Instructions :**
1. Answer **All** questions.
 2. Each question carries **Three** marks.
 3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Define Opcode and Operand?
2. Define Execution cycle and instrumentation cycle?
3. Draw the program status work (flag) register?
- * 4. Define the following instructions
(a) MUL AB (b) SETB C (c) NOP
5. What is the differences between machine level and Assembly level languages?
6. Define Machine cycle and T-state.
7. Define CALL and RET instructions.
8. Write about the break point debugging.
9. What is the SBUF register.
10. Define Gate and C/T bits of TMOD register.

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PART-B

10X5=50

- Instructions* : *
1. Answer any **Five** questions.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Draw the pin diagram of 8085 microprocessor and explain Function of each pin?
12. (a) Explain LDA and STA instructions?
(b) Draw and explain functional block diagram of 8051 microcontroller.
13. Explain about the internal and external memory organization of 8051 micro controller.
14. Define instruction format of 8051 and explain types of instruction formats with examples
15. Explain the following instructions (a) MOVX @ DPTR, A (b) PUSH direct (c) POP direct (d) DIVAB (e) DAA.
16. Explain the sequence of program when subroutine is called and executed and mention advantages subroutine.
17. (a) Draw the flowchart symbols and write their description.
(b) Determine the time delay from the following time delay program assume that the crystal frequency of the system is 11.0592 MHz.
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MOV R2, #32H
HERE: DJNZ R2, HERE
RET
18. Draw and explain about MAX232 and MAX 233.

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