

CSM31 Basics of Electronics and Microprocessors

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REG. NO

OCTOBER 2021

Time: Three hours

Maximum Marks: 75

- Note:
1. Answer ALL the questions in PART-A (1 mark each)
 2. Answer any ONE question from each unit in PART-B (3 marks each)
 3. Answer any ONE question from each unit in PART-C (10 marks each)
 4. The question paper contains TWO Pages

PART-A (1x10=10)

1. Define regulator.
2. Define break down voltage.
3. What is BCD?
4. What is the use of parity bit?
5. How many states are there in mod T counter?
6. Write the truth table of D flip-flop.
7. What are macros?
8. Define loader.
9. What is the use of XCHG instruction?
10. Which instructions are used for manipulating stack?

PART-B (3x5=15)

UNIT-I

11. What are the ideal characteristics of op-amp?
12. What is an opto coupler?

UNIT-II

13. Convert decimal no. 25 into octal, binary.
14. Explain working of odd parity checker.

UNIT-III

15. What is a shift register? What are its types?
16. Draw the block diagram of serial-in-serial out shift register.

UNIT-IV

17. Give the control word format of 8255.
18. How will you calculate physical address?

UNIT-V

19. Explain subroutine handling instructions
20. Explain the instructions used in manipulating direction flag.

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PART-C (10x5=50)

UNIT-I

21. With neat diagram, explain working of zener diode.
22. Derive expression for op-amp as adder and differentiator.

UNIT-II

23. Explain the operation of Full adder and half subtractor.
24. Explain the working of decoder and multiplexer.

UNIT-III

25. Explain the working of decade counter.
26. Explain the operation of JKMS and T flip-flops.

UNIT-IV

27. Explain DOS interrupt 21H.
28. Draw block diagram of 8086 and explain.

UNIT-V

29. Explain Arithmetic instructions.
30. Explain shift instructions.
