



R A N - 2 0 0 3 0 0 0 2 0 5 0 2 0 0 9 3

RAN-2003000205020093**T. Y. B. Sc. (Electronics) (Sem. - V) Examination March - 2023****Introduction to Microcontroller : Paper - VIII****सूचना : / Instructions**

(1)

नीचे दृष्टवित नशानीवाणी विगतो उत्तरवली पर अवश्य लपववी.
Fill up strictly the details of signs on your answer book

Name of the Examination:

T. Y. B. Sc. (Electronics) (Sem. - V)

Name of the Subject :

Introduction to Microcontroller : Paper - VIII

Subject Code No.: 2003000205020093

Seat No.:

Student's Signature

Q. 1 Write very short answers.**[8]**

1. Explain how memory banks are selected.
2. What is the purpose of XTAL pins on the microcontroller 8051?
3. What is the meaning of instruction CJNE @R I, #24H, LABEL.
4. What is the difference between microprocessor and microcontroller.

Q. 2 A. Discuss the Arithmetic and Logic instructions of 8051.**[8]**

- B. If the following instructions are executed sequentially what will be the value of Accumulator, Carry Flag and Auxiliary Carry flag
- MOV A,#55H
XRL A,#0FFH
ADD A,#128

[6]**OR****Q. 2 A. Draw a diagram representing the RAM architecture of 8051 and discuss it.** **[8]**

- B. Write a program to add two BCD numbers given in registers R0 and R1, write the result in 56H.

[6]**Q. 3 A. Discuss the TMOD and TCON registers of 8051 timers. Discuss the modes of the 8051 timers.****[8]**

- B. Draw a representative circuit of the port of 8051 and explain its working.

[6]**OR**

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[1]

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- Q.3** A. Discuss the general architecture of 8051. [8]
B. Write a program which counts the number of one's in the number stored in memory location 20H. [6]
- Q.4** **Write Short Notes. (ANY TWO)** [14]
1. Branching and Looping instructions.
 2. 8051 Port Circuit.
 3. Rotate and Swap instructions.
 4. 8051 interrupts.
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