



AB-3186
Third Year B. Sc. (Sem. V) Examination
March/April – 2015
Electronics : Paper - VIII
(Introduction to Microcontrollers)

Time : 2 Hours]

[Total Marks : 50

Instruction :

(1)

<p>नीचे दर्शायेव निशानीवाणी विगतो उत्तरवही पर अवश्य कर्जवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : THIRD YEAR B. SC. (SEM. V)</p> <p>Name of the Subject : ELECTRONICS : PAPER - VIII</p> <p>Subject Code No. : 3 1 8 6 Section No. (1, 2,...): Nil</p>	<p>Seat No. : □ □ □ □ □ □</p> <p>Student's Signature</p>
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- (2) Figures on the right indicate full marks.
- (3) All symbols and abbreviations have their usual meaning.
- (4) Non-programmable calculators are allowed.
- (5) Q.1 is compulsory.
- (6) Assume data if necessary.

- 1 Write Very Short Answers : 8
- (1) What is a microcontroller.
 - (2) Draw the pin diagram of microcontroller 8051.
 - (3) Explain the instruction DJNZ.
 - (4) What is the use of TRO and TRl bits in timer counter module.
- 2 (a) What is the difference between a microprocessor and a microcontroller? Draw the architecture of 8051 and explain each block. 10
- (b) Write a program to AND the values of P1 and P2 and place the result on P3. 4

OR

- 2 (a) Discuss the indirect addressing mode of 8051. Explain the indirect addressing mode using at least two different instructions. 10
- (b) Write a delay program of 1 mSec and explain it. 4
- 3 (a) Discuss the register structure of 8051. Discuss how the registers are organised in register banks and hence enumerate the importance of RS0 and RS1. 10
- (b) Write a program to copy the content of register bank 1 to the register bank 3 of 8051. 4

OR

- 3 (a) Explain the Timer/ Counter module of 8051. Explain the SFRs' related to the timer counter module. 10
- (b) Discuss the various modes of operations of timer/ counter module. 4
- 4 Write Short Notes (Any Two) 14
- (1) Bit Addressed RAM.
- (2) Ports of 8051.
- (3) Timer counter module of 8051.
- (4) Special function Register TMOD and TCON.