Printed Pages : 2

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EEC-014

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 131654

Roll No. ☐☐☐☐☐☐☐☐☐☐☐

B.Tech.
(SEM VI) THEORY EXAMINATION,2015-16
MICROCONTROLLER

Time : 2 Hours]   *[Total Marks : 50*

Note- *Attempt All Questions. All Questions carry equal marks*:-

1.   **Attempt any Two of the following questions:**

(a) With the help of block diagram explain the features of 8051 microcontroller. Explain the different power saving modes used in microcontroller 8051.

(b) Give the format of PSW 8051. What is difference between CY and OY flags of PSW? Why there is no sign flag in 8051?

(c) What do you mean by addressing mode? How manyaddressing modes are there in 8051? Give one exampleof each type.

2.   **Attempt any TWO of the following questions:**

a)   Which port of 8051 does not have any alternate function and can be used solely for I/O? Which port of the 8051 is bit addressable? What are the advantages of bit address-ability

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of 8051?Port? Write a program to monitor the P 2.7 bit, when it is low, send 55 H and AAH to P0 continuously.

b)   Discuss the SFR memory organization of 8051. Write a program to add two 16 bit numbers. The numbers are 2E5Fh and A4B4h. Store the sum in R6and R7, R6 should have the lower byte.

c)   How does an instruction differ form a directive? Discussthe different types of assembler directives of 8051.Why are the ORG and END directive also calledpseudo code?

3.   **Attempt any TWO of the following questions:**

a)   With the oscillator frequency11.0592MHz, find theTH1value needed to have the following baud rates: 9600,2400 and 1200. How interrupts are processed in 8051.

b)   Draw and discuss the format and bit definitions of thefollowing SFRs of 8051 :

i.   TMOD

ii.   TCON

c)   Explain the operation of an 8051UART device with the help of clock diagram. Also write a program which will transmit an 8-bit data via the serial port. A ninth bit is to be used as an odd parity bit.

4.   **Attempt any TWO of the following questions:**

a)   Show the ADC connection to 8255 and write the program for the showed connection.

b)   What are Enlist the salient features of 8096 microcontroller andexplain the important blocks of its architecture.

c)   Describe MC68HC11 microcontroller features in detail.

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