SUBJECT CODE:- 123
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E. (CSE/IT) Examination Nov/Dec 2015
Microprocessors
(Revised)

[Time: Three Hours]   **[Max. Marks: 80]**

"Please check whether you have got the right question paper."
N.B   i) Q.No.1 from section A and Q.No.6 from section B are compulsory.
                 ii) From remaining questions of section A and B attempt any two.

Section A

Q.1   Attempt any Five from following.   10
   a) What is the difference between physical address and logical address?
   b) What is the function of base pointer and stack pointer registers?
   c) For 8086 microprocessor give default 16 bit segment and offset combination of registers.
   d) What is memory paging mechanism?
   e) What is the difference between intersegment and intersegment jump.
   f) Give function of following assembler directives
      i) DUP
      ii) EQU
   g) Explain the difference between IZ and JNZ instruction
   h) What is flat mode memory addressing?

Q.2   a) Explain control register structure of the 8086 microprocessor   08
      b) Write an assembly language program to find out whether the entered number is even or odd.   07

Q.3   a) What is stack memory? Explain the working of stack with the help of PUSH and pop instructions.   08
      b) Write an assembly language program. For addition of two BCD numbers.   07

Q.4   a) Explain programming model of 8086.   08
      b) Explain shift instructions with suitable examples.   07

Q.5   a) What are conditional jumps? Which flog can be tested by conditional jump instructions, explain JNZ, JA, JO?   08
      b) Explain following instruction with suitable example   07
         1. ADC
         2. DIV
         3. JMP
         4. INT 3

Section – B

Q.6 Attempt any five from the following   10
   a) What is difference between minimum and maximum mode operation of 8086 microprocessor.
   b) What does ALE pin float to its high impedance state?
   c) What is the function of output buffer full (OBF) and acknowledge (ACK) signal of 8255 PPI?
   d) Why SRAM is called as volatile memory?
   e) What is the need of address decoding?
   f) Why data & address buss of 8086 microprocessor are multiplexed?
   g) What is hand shaking?
   h) What is the purpose of CS or CE pin on memory derive?

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Q.7	a)	With suitable diagram explain timing diagram of write cycle of 8086	08
	b)	Explain the pin-out of the 8284 A clock generator.	07
Q.8	a)	What is PPI (programmable peripheral interface)? Explain its blocks with suitable diagram.	08
	b)	Explain 8254 programmable interval timer with suitable block diagram.	07
Q.9	a)	What are interrupts? Explain hardware interrupts of 8086 microprocessor.	08
	b)	Draw pin diagram 8086 microprocessor and explain the functions of following pins.	07

      i.   NMI
     ii.   ALE
    iii.   MN/MX
    iv.   S0, S1, S2

Q.10	a)	Explain memory devices as EPROM and SRAM.	08
	b)	With suitable example explain how to generate square wave using 8254	07

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