

C 80099

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2015

(UG-CCSS)

Core Course

Computer Science

CS 6B 16—MICROPROCESSOR AND APPLICATIONS

(2012 Admissions)

Time : Three Hours

Maximum : 30 Weightage

I. Answer *all* questions :—

- 1 Intel 8086 uses _____ address lines.
- 2 The instruction with _____ prefix will execute repeatedly till the count in the cx register will be zero.
- 3 _____ interrupts are used in critical events such as Power failure, Emergency, Shut off etc.
- 4 In 8255 under the I/O mode of operation, we have _____ modes.
- 5 BHE of 8086 processor signal is used to interface the _____.
- 6 8086 microprocessor is interfaced to 8253 Programmable Interval Timer, the maximum number by which the clock frequency on one of the timer is divided by _____.
 - (a) 2^{16} .
 - (b) 2^8 .
 - (c) 2^{10} .
 - (d) 2^{20} .
- 7 Macros are _____.
 - (a) functions which can be repeatedly used.
 - (b) code-blocks inserted at the time of compilation of C program.
 - (c) code-blocks inserted at the time of compilation in C or at the time of assembly when using an assembler.
 - (d) functions with no arguments.
- 8 _____ instruction returns program execution from a procedure to the next instruction after CALL instruction.
- 9 _____ in the 8086 microprocessor points to the address of next instruction to be executed.
- 10 The _____ directive directs assembler to set the location counter at memory address specified after the directive.

Turn over

- 11 The _____ flag in 486 microprocessor indicates the maximum privilege level permitted for the execution of IO instructions.
- 12 When an operand is stored in a memory location, how far the operand's memory location within a memory segment from the starting address of the segment is called _____.
- (12 × ¼ = 3 weight)

II. Answer *all* questions :

- 13 What is Programmable DMA Controller ?
- 14 Explain the role of the pins TEST, LOCK.
- 15 What is an instruction queue ? Explain.
- 16 Explain the instructions :
- | | |
|--------------|--------------|
| (i) LDS ; | (ii) PUSHF ; |
| (iii) TEST ; | (iv) CLD. |
- 17 Explain how the physical address is formed in microprocessor 8086.
- 18 What is the difference between the two instructions MUL and IMUL ?
- 19 Write an ALP to find the largest number in a data array ?
- 20 What is key debouncing ?
- 21 What are DOS Interrupts ?

(9 × 1 = 9 weight)

III. Answer any *five* questions :

- 22 Explain different types of registers in 8086 microprocessor.
- 23 What are the features of Pentium Processors ?
- 24 Write down the addressing modes of 80386 with examples.
- 25 Define the structure of interrupt vector table of 8086.
- 26 Explain the pin configuration of 8259.
- 27 Explain the control word register format of IC 8253.
- 28 Explain any *four* assembler directives.

(5 × 2 = 10 weight)

IV. Answer any *two* questions :

- 29 Explain the pipelining architecture of 8086 with suitable diagram.
- 30 Compare the features of 80386, 80486 and Pentium.
- 31 Explain the Data transfer and Arithmetic instructions of 8086.

(2 × 4 = 8 weight)