BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
YELAHANKA – BANGALORE - 64

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

I INTERNAL ASSESSMENT TEST, MARCH – 2017

Subject: Microprocessors & Microcontrollers	*Subject Code: 15CS44*	*Branch & Semester : CSE - 4 A & B*
Max. Marks : 30 Marks	*Date: 17/03/2017* *Time: 2 PM - 3:30 PM*	*Faculty: Mr. Shankar R*

Answer FIVE full questions, selecting ONE full question from each Part.
(Part D & Part E are compulsory questions.)

Q. No	Question	CO, PO, K level	Marks
	PART-A		
1.	Describe in detail with a neat figure the working of the internal architecture of the 8086 MP.	*CO1 (PO1) K1*	06
2.	Describe in detail the Register Organization & the various bits of a Flag Register for 8086 MP.	*CO1 (PO1) K1*	06
	PART-B		
3a.	Describe real mode addressing. Recite default segment and offset registers.	*CO1 (PO1) K1*	03

3b.	Restate the Flag register after executing the following code:
	MOV AX,34F5H
	ADD AX,95EBH
		CO1 (PO1,PO2) K2	03

4a.	Identify the addressing modes of the following instructions and explain them briefly: i. MOV WORD PTR [SI], 20H ii. MOV ES: [1000H], 10H iii. MOV CX, NUM [BX + DI]	*CO1 (PO1,PO2) K1*	03
4b.	Recall the Memory Map of IBM PC.	*CO1 (PO1) K1*	03
	PART-C		
5.	Demonstrate an assembly language program to reverse a given string and verify whether it is a palindrome or not. Display the appropriate message.	*CO1,CO4 (PO1,PO3) K3*	06
6.	Demonstrate an assembly language program to read the current time and Date from the system and display it in the standard format on the screen.	*CO1,CO4 (PO1,PO3) K3*	06
	PART-D		
7.	Recognize the Processor we use in Microprocessor Lab at BMSIT&M. Also, recall its brief history.	*CO1 (PO1,PO2) K1*	06
	PART - E		
8.	We came across how difficult it is to print year while accessing date using 2AH function call. Construct a solution which addresses the above problem.	*CO1,CO5 (PO2,PO3) K3*	06

Course Outcomes: Students will be able to	
CO1	*Describe the architecture of X86 Microprocessors and have an introduction to Assembly Language Programming.*
CO2	*Discuss the Instruction Set of X86 Microprocessors and extend it to interface various devices to X86 families*
CO3	*Understand ARM philosophy and its Instruction Set.*
CO4	*Demonstrate the skills to code in Assembly Language, ARM.*
CO5	*Construct software and hardware programs using Assembly Language Programming, ARM.*

K1: Remember	***K2:Understand***	***K3: Apply***	***K4: Analyze***	***K5: Evaluate***	***K6: Creation***

********** *All the Best!* **********