

**University of Mumbai**  
**Program: Cyber Security**  
**Curriculum Scheme: Rev2019**  
**Examination: SE Semester IV**

**Course Code:CSC405 and Course Name: Microprocessor**

Time: 2 hour 30 minutes

Max. Marks: 80

<b>Q1.</b>	<b>Choose the correct option for following questions. All the Questions are compulsory and carry equal marks</b>
1.	In 8086 address bus is
Option A:	16 bits
Option B:	20 bits
Option C:	8 bits
Option D:	32 bits
2.	Suppose register AX=1234H and BX=2345H, what is the contents of AX & BX after MOV BX,AX?
Option A:	AX=1234H,BX=2345H
Option B:	AX=1234H,BX=1234H
Option C:	AX=2345H,BX=2345H
Option D:	AX=1245H,BX=1234H
3.	8086 can access upto
Option A:	64KB
Option B:	32KB
Option C:	128KB
Option D:	16KB
4.	During the execution of an interrupt, the data pushed into the stack is the content of
Option A:	CS and IP
Option B:	AX and BX
Option C:	SI and DI
Option D:	DS and DI
5.	The 80386DX is a -----bit processor
Option A:	16
Option B:	32
Option C:	64
Option D:	8
6.	After every response to the single step interrupt the flag that is cleared is
Option A:	Interrupt flag
Option B:	Trap flag

Option C:	Directional flag
Option D:	Overflow flag
7.	The feature of Pentium 4 is
Option A:	works based on NetBurst microarchitecture
Option B:	clock speed ranges from 1.4GHz to 1.7GHz
Option C:	hyper-pipelined technology
Option D:	all of the mentioned
8.	In protected mode of 80386 ,-----register is used as Selector to address descriptors
Option A:	Segment register
Option B:	Debug register
Option C:	Control Register
Option D:	General Purpose register
9.	Pentium Microprocessor has -----pipeline stages
Option A:	5
Option B:	3
Option C:	4
Option D:	7
10.	In Protected mode ,80386 can address -----virtual memory
Option A:	32GB
Option B:	64MB
Option C:	32TB
Option D:	64TB

<b>Q2</b>	<b>Solve any Four out of Six</b>	<b>5 marks each</b>
A	Explain the programming model of 8086.	
B	Write an assembly language program to find the largest number from the array.	
C	What is memory segmentation? State advantages of memory segmentation.	
D	Explain Virtual Mode (VM-86) of 80386 processor.	
E	Explain cache organization of Pentium processor.	
F	Explain flag register of 80386 microprocessor.	

<b>Q3</b>	<b>Solve any Two Questions out of Three</b>	<b>10 marks each</b>
A	Design 8086 based system for the following requirements. i) clock frequency 5MHz. ii) 512KB RAM using 32KB X 8 iii) 256KB ROM using 32KB X8	
B	Explain the interrupted structure of 8086.	
C	Explain Branch prediction Logic of Pentium	

<b>Q4</b>	<b>Solve any Two Questions out of Three</b>	<b>10 marks each</b>
A	Explain different addressing modes of 8086 microprocessor.	
B	Explain minimum mode configuration of 8086.	
C	Explain interfacing of 8255 with 8086 with suitable diagram.	