I D NO.	

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 40 % Max Marks: 80 Max Time: 2 hrs. 07 May 2018, Monday

ENDTERM FINAL EXAMINATION MAY 2018

Even Semester 2017- 18 Course: **CSE206 Microprocessors and Microcontrollers** IV Sem. CSE

Instructions:

(i) *Read the question properly and answer accordingly.*
(ii) *Question paper consists of 3 parts.*
(iii) Scientific and Non-programmable calculators are permitted

---

Part A

(2 Q x 15 M = 30 Marks)

1. Design and develop an ALP to generate triangular and square waveform using DAC interface.
2. What are the various operating modes of 8255 and explain with appropriate diagrams.

Part B

(2 Q x 10 M = 20 Marks)

3. Explain the following addressing modes in 8051
   a) Immediate Addressing
   b) Register Addressing
   c) Direct Addressing
   d) Register – Indirect Addressing
   e) Indexed Addressing
4. Describe with a neat diagram the architecture of 8255.

Part C

(3Q x 10 M = 30 Marks)

5. Differentiate between Microprocessors and Microcontrollers.

6. Explain the concept of While do programs and repeat until programs with suitable example.
7. With respect to 8255
   a) Obtain the control word value for the configuration, Port A –Input Port ,Port B- Output Port, Port C- Output Port, All ports in Mode 1
   a) Obtain the configuration details for the control word value – 9Ah

ID NO:	

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 20% Max Marks: 40 Max Time: 1 hr. 26 March Monday 2018

TEST – 2 **SET A**

Even Semester 2017-18 Course: **CSE206 Microprocessors and Microcontrollers** **IV Sem. CSE**

Instruction:

(i) Read the question properly and answer accordingly.

(ii) Question paper consists of 2 parts.

(iii) Scientific and Non-programmable calculators are permitted

---

Part A

(2Q x 10M = 20 Marks)

1. Explain with example the following addressing modes of 8086

(i) Immediate addressing mode

(ii) Register addressing mode

(iii) Register based indirect addressing mode

(iv) Based index addressing mode

(v) Register relative addressing mode (5 * 2=10 M)

2. Explain the following assembler directives of 8086 with example

(i) ORG (ii) DB (iii) DW (iv) EQU (v) EVEN (5 * 2=10 M)

Part B

(1Q x 10M = 10 Marks)

3. Write an ALP to check the given string is palindrome or not

OR

4. Write an ALP to check the number is prime or not

Part C

(1Q x 10 M =10 Marks)

5. Illustrate the following jump and string instructions with suitable examples indicating corresponding flag status.

(i) JBE (ii) JP (iii) SCAS (iv) MOVSB (v) CMPSB (2 * 5=10 marks)

ID NO:	

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 20 % Max Marks: 40 Max Time: 1 hr. 21 Feb Wednesday 2018

TEST – 1

Even Semester 2017-18 Course: **CSE 206 Microprocessors and Microcontrollers** IV Sem. CSE

Instruction:

(i) Read the question properly and answer accordingly.
(ii) Question paper consists of two parts
(iii) Scientific and Non-programmable calculators are permitted

---

Part A

(2Q x 10M = 20 Marks)

1. (i) With neat diagrams explain Von-Neumann and Harvard architecture (modified also) (8 Marks)

   (ii) Write the format of 8086 Flag register. (2 Marks)

2. With a neat diagram explain in detail 8086 microprocessor architecture. (10 Marks)

Part B

(2Q x 10M = 20 Marks)

3. Explain the following instructions with example

   (i) SAL (ii) RCL (iii) DAA (iv) LEA (v) XCHG (10 Marks)

4. Write an ALP program to sort 'n' **(consider 16 bit numbers)** numbers in an ascending order using bubble sort technique. (10 Marks)