SARDAR PATEL UNIVERSITY
S.Y.B.C.A. - (SEM – III) - (CBCS) EXAMINATION 2018
US03EBCA01 - INTRODUCTION TO MICROPROCESSORS

TIME: 02: 00 P.M. TO 04: 00 P.M.

DATE: 02 – 11 – 2018 (Friday)

NOTE: Right hand figure indicates the marks of each question.

TOTAL MARKS: [70]

Q – 1 Select an appropriate option for following multiple choice questions. **[10]**

1. The _____ is responsible for performing all external bus operations.
   A. EU
   B. BUS
   C. BIU
   D. ALU

2. The_____ are used to balance power supply in computer.
   A. Transistors
   B. Capacitors
   C. Micro Chips
   D. None of these

3. The assembler list file extension is_____.
   A. .OBJ
   B. .LST
   C. .LIS
   D. .ALU

4. DIV stands for_____.
   A. Division
   B. Signed Division
   C. Unsigned Division
   D. None of these

5. AND-AND corresponding_____ operands.
   A. Bits of two
   B. Bytes of two
   C. Words of two
   D. All of these

6. The Full Form of AAA instruction is_____.
   A. Adjust for Addition
   B. Adjust After Addition
   C. ASCII Adjust for Addition
   D. None of these

7. ROL stands for Rotate_____ of operand Left.
   A. All Bytes
   B. Each Bytes
   C. All Bits
   D. Each Bits

8. JZ is executed when zero flag is _____.
   A. Reset
   B. Set
   C. Undefined
   D. None of these

9. The END directive ends the_____.
   A. Segment
   B. Program
   C. Procedure
   D. None of these

10. The SEGMENT directive is used to indicate the_____ of logical segment.
    A. Start
    B. End
    C. Address
    D. None of these

Q – 2 Short questions (Attempt any Ten) **[20]**

1. Define the term Microprocessor and List all components of it.
2. What is Pipelining?
3. Give a full-form of the given terms: CF, PF, AF, OF
4. State the example of SUB instruction with Syntax.
5. Explain NOT instruction with syntax.
6. State the example of given instructions with syntax and full form: AAD, ADC.
7. Example SHR instruction with example.
8. What do you mean by conditional jump?
9. Describe ROL instruction with example.
10. Define Assembler Directives. Mention all directives.
11. State the difference between WHILE-DO and REPEAT-UNTIL.
12. Explain multiple IF-THEN-ELSE with its syntax.

Q – 3   **A.** Explain 8086 internal architecture with diagram.   **[10]**

<p align="center">OR</p>

Q – 3   **A.** What is an Assembler? Explain the concept of assembler.   **[05]**

        B. Explain all major directions in microprocessor evaluation.   **[05]**

Q – 4   **A.** Explain MOV and CMP instructions in detail with example.   **[06]**

        B. Describe INC and DEC instructions along with its example in detail.   **[04]**

<p align="center">OR</p>

Q – 4   **A.** Describe all logical instructions in detail.   **[06]**

        B. Explain DIV instruction in detail.   **[04]**

Q – 5   **A.** Explain LOOPZ instruction with example.   **[05]**

        B. Describe JNC instruction in detail with example.   **[05]**

<p align="center">OR</p>

Q – 5   **A.** Write a short note on Rotate Instructions ROL and ROR with example.   **[05]**

        B. Write a short note on Shift Instructions SHL and SHR with example.   **[05]**

Q – 6   **A.** Which are the Looping structures? Explain any one in detail.   **[05]**

        B. Write a program for largest number from given three numbers.   **[05]**

<p align="center">OR</p>

Q – 6   **A.** Explain ASSUME and DB assembler directives in detail with example.   **[05]**

        B. Write a program for Multiplication (Without MUL Instruction).   **[05]**