SEAT No._____

[7]

SARDAR PATEL UNIVERSITY
BCA Semester-3 Examination, 2022 [NC] [
US03EBCA01 || INTRODUCTION TO MICROPROCESSORS
26th September, 2022.

Time : 12.30 p.m. – 02.30 p.m.

Marks: 70

Q-1   Select the appropriate option for the following questions: **10**

1) Which of these is also called microcontrollers?
   A. Bit-Slice processors
   B. General Purpose CPUs
   C. Embedded Controllers
   D. None of these

2) A flag is a one type of _____.
   A. Latch
   B. Flip-Flop
   C. Gate
   D. None

3) NOT stands for _____.
   A. Negative
   B. Nothing
   C. Invert all Byte
   D. Invert each Bit

4) DIV stands for _____.
   A. Division
   B. Unsigned Division
   C. Signed Division
   D. None

5) ROL stands for Rotate _____ of operand left.
   A. each Bits
   B. each Bytes
   C. all Bits
   D. all Bytes

6) The destination label in JZ instruction must be in the range of _____.
   A. 0 to 255
   B. -256 to 255
   C. -128 to 128
   D. None of these

7) The ASSUME directive is used to tell the assembler the name of the _____ segment it should use for a specific segment.
   A. Code
   B. Logical
   C. Data
   D. Stack

8) There are _____ types of control structure in assembly language programs.
   A. 4
   B. 2
   C. 3
   D. None

9) An END directive ends the _____.
   A. segment
   B. procedure
   C. program
   D. None of these

10) _____ Kbytes are allocated for Data Segment register.
    A. 64
    B. 32
    C. 128
    D. 16

Q-2   Tick (TRUE or FALSE) and Fill in the blanks. **08**

1) The capacitors are used to balance power supply in Computer. [TRUE/FALSE]

2) In AND instruction CF,OF flags are reset. [TRUE/FALSE]

3) SHL stands for Shift Operand Bytes left. [TRUE/FALSE]

4) The LABEL directive is used to give name to current value in the location counter. [TRUE/FALSE]

1

5) The _____ is responsible for decoding and executing instructions.

6) AAA stands for _____.

7) JZ is executed when the _____ flag is set.

8) The full form of DB directive is _____.

Q-3   Give short answers of the following questions: (ANY TEN)   20

1) List all the major directions in microprocessors evolution.

2) Explain the following terms: 1) ALU   2) Flag

3) What is the meaning of 16-bit in 8086 microprocessor?

4) Explain NOT instruction with example.

5) State the INC – Increment instruction

6) State the example of SBB instruction with syntax.

7) Differentiate ROL and ROR.

8) Explain SHR instructions with example

9) What do you mean by Conditional JUMP? Explain with example

10) Draw structure of a typical assembly program.

11) What is the use of PAGE and TITLE directive in assembly program?

12) Write syntax of multiple IF-THEN-ELSE with example.

Q-4   Give Long answers of the following questions: (ANY FOUR)   32

1) Explain BIU in detail.

2) Explain EU in detail.

3) Explain INC & DEC instructions in detail.

4) Explain MUL instruction in detail.

5) What are the differences between Unconditional and conditional JUMP instructions? Explain with an example.

6) Write a short note on Shift instructions SHL and SHR with example.

7) Explain structure of assembly program.

8) Write a program for Addition of Two Numbers.

—X—

②