

[31/A-23]

SEAT No. _____

Total number of printed pages: 2

SARDAR PATEL UNIVERSITY

MASTER OF COMPUTER APPLICATIONS SEMESTER – III EXTERNAL ATKT EXAMINATIONS

PS03CMCA24 (System Software)

Saturday, April 13th, 2019

Time: 2:00 pm to 5:00 pm

Max. Marks: 70

Q-1 Choose the most appropriate option for each question:

[8]

- The address bus of 8086 is of _____ bits
A. 8
B. 16
C. 20
D. 32
- _____ is an example of the 8086 control flags.
A. SF
B. IF
C. ZF
D. None of these
- _____ instruction cause execution to jump to a given label if ZF is 1.
A. JMP
B. JZ
C. JC
D. None of these
- _____ does not indicate the end of program execution, it indicates the end of program.
A. end
B. endm
C. endp
D. None of these
- _____ eliminates the need to memorize numeric operation code.
A. Symbolic Operands
B. Mnemonic
C. Variables
D. Data Declared
- An entry in the mnemonic table has _____ primary fields.
A. 2
B. 3
C. 4
D. 1
- The in TII entry is a pair of (<instruction address>, _____)
A. <symbolic constant>
B. <opcode>
C. <Instruction>
D. <symbol>
- _____ analysis tokens are grouped hierarchical into nested collections with collective meaning.
A. Syntax
B. Linear
C. Semantic
D. None of these

(1)

(P.T.O.)

Q-2 Answer the following questions (Any Seven): [14]

1. Explain the use of Instruction Stream byte Queue in internal architecture of 8086 microprocessor.
2. Explain execution gap.
3. Write the code snippet for outputting a character for console.
4. Define the following : 1) Program Generator 2) Forward Reference
5. Draw syntax tree for output := x + y / 50 instruction.
6. List the functions performed by Preprocessors.
7. List different types of system buses.
8. Explain "ROR" 8086 assembly instruction with code.
9. List different uses of embedded system.

Q-3 Answer the following questions:

- A. List and explain all six conditional flags available in 8086 Microprocessor architecture. [6]
- B. Write the program to convert a character to lowercase. [6]

OR

- B. Explain the detailed meaning of n-bit microprocessor. [6]

Q-4 Answer the following questions:

- A. Discuss the use of Symbol table and Mnemonic table during analysis and synthesis phases. [6]
- B. List and explain different types of iteration control instructions in 8086 assembly [6]

OR

- B. Explain First Pass in a two pass structure of Assemblers. [6]

Q-5 Answer the following questions:

- A. Discuss Hierarchical analysis and lexical analysis occurring during compilation process. [6]
- B. Explain binary program generated as an output of linker. [6]

OR

- B. Write a short note on any two compiler construction tool. [6]

Q-6 Answer the following questions:

- A. Discuss real time and floating point arithmetic issues with embedded systems. [6]
- B. Write the steps followed by linkers to resolve external references. [6]

OR

- B. Explain the different chips used in embedded systems. [6]

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