Tribhuvan University

Faculty of Humanities & Social Sciences

OFFICE OF THE DEAN

2018

Bachelor in Computer Applications **Full Marks: 60**
Course Title: Microprocessor and Computer Architecture **Pass Marks: 24**
Code No: CACS 155 **Time: 3 hours**
Semester: II

Centre: **Symbol No:**

Candidates are required to answer the questions in their own words as far as possible.

Group - A

Attempt all the questions. **[10×1 = 10]**

Circle (O) the correct answer.

1. How many number of pins are there in 8085 Microprocessor?
   a) 16 b) 20
   c) 32 d) 40
2. Which one of the following interrupt has the highest priority?
   a) RST7.5 b) TRAP
   c) RST6.5 d) RST5.5
3. How many bytes make a word of 32 bits?
   a) One Byte b) Two Bytes
   c) Three Bytes d) Four Bytes
4. Which one of the following flag has set or reset value on the basis of even or odd number of 1's in result?
   a) Zero b) Carry
   c) Parity d) Sign
5. What is the size of MOV B, A instruction in 8085 Microprocessor?
   a) One Word b) Two Word
   c) Three Word d) Four Word
6. Which one of the following bit(s) specify the direct or indirect address?
   a) Address bits b) Opcode Bits
   c) Mode Bit d) Control Word
7. Which one of the following term is correct for the process of transformation of the instruction code bits to an address in control memory where the routine is located?
   a) Mapping b) Pipelining
   c) Sequencing d) Acknowledging
8. Which one of the following is not a logical and bit manipulation operation?
   a) Enable Interrupt b) Increment
   c) Clear Carry d) Clear
9. Which one of the following is not the pipelining hazard?
   a) Data dependency b) Resource conflict
   c) Branch conflict d) Interrupt Hazard
10. Which one of the following organization of parallel processing is only a theoretical interest since no practical system has been constructed?
    a) SISD b) SIMD

c) MISD

d) MIMD

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Group - B

Attempt any SIX questions. **[6 x 5 = 30]**

11. Explain the Bus organization of 8085 Microprocessor.
12. Explain the opcode fetch machine cycle for MVI A, 32H with timing diagram.
13. Explain the 8085 Instruction addressing modes with example.
14. Explain the memory hierarchy with diagram.
15. Explain the organization of Microprogrammed Control Unit.
16. Define control word. Explain the procedure for generating control word for specific operation.
17. Define instruction pipeline. Explain the four-segment instruction pipeline with example.

Group - C

Attempt any Two Questions. **[10 x 2 = 20]**

18. Explain the functional block diagram of 8085 Microprocessor.
19. Explain the design and control logic of Accumulator.
20. Explain the different data transfer and manipulation instructions with example.

Best of Luck!