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**H-6025**

**M.Sc. (Semester-II) Examination, 2022**

**INFORMATION TECHNOLOGY**

**( Computer System Organization  
and Architecture)**

***Time Allowed : Three Hours***

***Maximum Marks : 70***

***Minimum Passing Marks : 25***

**Note :** Question paper is divided into four sections. Attempt questions of all four sections as per direction. Distribution of marks is given in each section.

**SECTION - A**

**(Objective Type Questions)**

**Note :** Attempt **any ten** questions. Each question carries **1** mark.

[10×1=10]

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**( 1 )**

**[P.T.O.]**

1.(A) Fill in the blanks :

- (i) There are \_\_\_\_\_ types of shift micro operations.
- (ii) A stack organized computer uses instruction of \_\_\_\_\_ .
- (iii) Pipelining is a \_\_\_\_\_ technique.
- (iv) \_\_\_\_\_ receives data from central processing unit.
- (v) The fastest data access is provided using \_\_\_\_\_ .

(B) Multiple Choice Type :

- (vi) Mnemonic represent :
  - (a) Operation Codes
  - (b) Strings
  - (c) Address
  - (d) None of the above

(vii) The first machine cycle of an instruction cycle is always a :

- (a) Memory Read Cycle
- (b) Fetch Cycle
- (c) I / O Read Cycle
- (d) Memory Write Cycle

(viii) The instruction like MOV or ADD are called as :

- (a) Commands
- (b) Operators
- (c) QP-Code
- (d) Data

(ix) Characteristics of RISC instruction set is :

- (a) One instruction per cycle
- (b) Two instruction per cycle
- (c) Three instruction per cycle
- (d) None of the above

(x) During DMA Transfer, DMA Controller transfers data :

- (a) Directly between memory and registers
- (b) Directly between the I/O module and main memory
- (c) Directly from memory to CPU
- (d) Directly from CPU to memory

(xi) Which of the following is correct example for Auxiliary memory?

- (a) Magnetic Disks
- (b) Tapes
- (c) Flash Memory
- (d) Both (a) and (b)

(xii) Swap Space exist in :

- (a) Primary memory
- (b) Secondary memory

- (c) CPU
- (d) All of the above

## **SECTION - B**

### **(Very Short Answer Type Questions)**

**Note :** Attempt **any five** questions. Each question carries **2** marks. Maximum word limit is 25-30 words. [2×5=10]

2.      (i)      What is Arithmetic Micro operation?
- (ii)      What is computer instruction?
- (iii)     What is meant by Assembly language?
- (iv)     What is RISC pipeline?
- (v)      What is meant by I/O interfaces?
- (vi)     What is Associative memory?
- (vii)    What is memory management hardware?

## **SECTION - C**

### **(Short Answer Type Questions)**

**Note :** Attempt **any five** questions. Each question carries **4** marks. Maximum word limit is 250 words. [4×5=20]

3. (i) What is meant by Micro operation? Explain various micro operations in brief.
- (ii) What is Compiler? Explain Assembler, Compiler and Interpreter.
- (iii) What is meant by Stack? Describe stack organization in detail.
- (iv) What is Multiprocessor? Explain in detail.
- (v) What is DMA? Describe the function and importance of DMA.
- (vi) What is meant by Cache memory? Explain various types of Cache memory in detail.
- (vii) What is meant by Data Transfer? Explain various modes of data transfer in detail.

### **SECTION - D**

#### **(Essay Type Questions)**

**Note :** Attempt **any three** questions. Each question carries **10** marks. Maximum word limit is 500 words. [3×10=30]

4. (i) What is Computer Organization? Describe in detail.
- (ii) What is meant by Addressing mode? Describe various addressing modes in detail.
- (iii) What is parallel processing? Explain various types of parallel processing in detail.
- (iv) What is meant by Memory? Describe memory organization in detail.

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