

Daffodil International University

Faculty of Science and Information Technology
Department of Computing and Information System

Class Test Examination: Spring Semester 2021

Program: B.Sc. in CIS (Batch – 5th) 3rd Year 1st Semester

Course Code: CIS 312

Course Title: Computer Architecture and Organization

Time: 5 Minutes

Total Marks: 5 X 1 = 5

Student ID:	Batch:	Session:
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Part 1: MCQ

These are single best answer type of questions. Write down the most appropriate one on your answer script.

1. Fourth Industrial Revolution (IR 4) will be included in
 - A. First Generation
 - B. Fourth Generation
 - C. Fifth Generation
 - D. None of them
2. Which one is first commercial computer?
 - A. UNIVAC
 - B. ENIAC
 - C. EDSAC
 - D. EDVAC
3. HDL format AC: =M(X) indicates.....
 - A. Invoke X and M to AC
 - B. Load AC from M to X
 - C. Load M from X to AC
 - D. Load X from M to AC
4. During the execution of the instructions, a copy of the instructions is placed in the.....
 - A. Register
 - B. RAM
 - C. System heap
 - D. Cache
5. Instruction set is a group of.....
 - A. Commands
 - B. Programs
 - C. Files
 - D. Data

Part 2: SAQ

Time: 55 Minutes

Total Marks: 10

(Answer the questions from the followings)

[The figures in the right margin indicate full marks for the respective question]

1.		<p>Answer the questions by taking data from the following table.</p> <table border="1" style="margin-bottom: 10px; border-collapse: collapse; width: 30%;"> <thead> <tr> <th colspan="4">CPI for this instruction class</th> </tr> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>CPI</td> <td>1</td> <td>2</td> <td>3</td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <table border="1" style="margin-bottom: 10px; border-collapse: collapse; width: 100%;"> <thead> <tr> <th rowspan="2">Code Sequence</th> <th colspan="3">Instruction counts for instruction class</th> </tr> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>3</td> <td>2</td> </tr> <tr> <td>2</td> <td>4</td> <td>2</td> <td>1</td> </tr> </tbody> </table> </div> <div style="width: 50%;"> <p>a) Which code sequence executes the most instructions?</p> <p>b) Which will be faster CPI then other?</p> <p>c) What is the CPI for each code sequence?</p> </div> </div>	CPI for this instruction class					A	B	C	CPI	1	2	3	Code Sequence	Instruction counts for instruction class			A	B	C	1	2	3	2	2	4	2	1	[5]
CPI for this instruction class																														
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Code Sequence	Instruction counts for instruction class																													
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1	2	3	2																											
2	4	2	1																											
2.	a)	Define Instruction Set Architecture. Describe the communication procedure of processor and memory with the help of cache.	[2]																											
	b)	Mathematically show the relationship between performance and execution time of X and Y computer.	[1.5]																											
	c)	How N number of multiplications is completed by a computer system?	[1.5]																											