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| **Mid-Term Summer-2021**  **Department of Business Administration** |

**Subject: Intro. to Info. & Communication Technology Submission Day: Wednesday**

**Instructor: Monis Ahmed Thakur Submission Date: 04 – August – 2021**

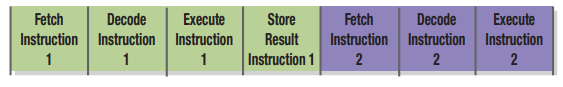
**Program: BBA / BS(CS) Max. Marks: 25**

Please follow the instructions carefully:

1. Write your answers directly on the Black Board (recommended) or upload word file before the due date on Blackboard.
2. Write your name and registration ID on the first page of your Word file.
3. Answer scripts can only be uploaded on Blackboard only during the submission time.
4. To avoid any unforeseen problems, you are advised to follow the Guide lines communicated by the Faculty Members.
5. Submission of answer copy(ies) will be considered acceptable through Blackboard only. Therefore, do not submit your document through email or any other medium.
6. Use 12 pt. font size and Times New Roman font style along with 1-inch page margins.
7. Follow the requirements of the word limit and the marking criteria while writing your answers.
8. Provide relevant, original and conceptual answers, as this exam aims to test your ability to examine, explain, modify or develop concepts discussed in class.
9. Do not copy answers from the internet or other sources. The plagiarism of your answers may be checked through Turnitin.
10. Double check your word file before uploading it on BlackBoard to ensure that you have uploaded the correct file with your answers.

**Question #01: Marks: 05**

Pipelining is a method of processing multiple instructions in a single timeslot. How pipelining achieves multi-processing with a single-core CPU? What would be state(s) of ALU and FPU at any given time-slot if pipelining is not used? With the help of a diagram, explain the pipeline stages of a single-core CPU to fetch, decode, execute and store 6 instructions. The below diagram represents the process without pipelining.



**Rubrics (Scoring Guide)**

- Analysis = 50%

- Comprehension = 50%

**Question #02: Marks: 05**

When computer needs to read data located on hard disk drive, there are two methods which may be used to locate the required data. Compare and contrast the two methods sequential access and random access? What are tracks, sectors, clusters and cylinders in hard disk drive? Why Solid-State drives are considered faster in data retrieval and seeking time?

**Rubrics (Scoring Guide)**

- Reasoning = 50%

- Details = 50%

**Question #03: Marks: 05**

There are an increasing number of cloud applications available and the current version of Office is available in both installed and cloud versions. What are the advantages and disadvantages of cloud software? Which do you prefer to use for university-related documents and why? If you prefer installed software, what would have to change about cloud software in the future to change your opinion?

**Rubrics (Scoring Guide)**

- Discussion = 50%

- Future recommendation = 50%

**Question #04: Marks: 05**

Why Linux is considered a secure operating system as compared to Windows? What firewall software would you recommend for home users and for business users? Specify the reason for choosing different for different users (if any)

**Rubrics (Scoring Guide)**

- Discussion = 60%

- Recommendation = 40%

**Question #05: Marks: 05**

Explain the six basic types of computers which includes Embedded Computers, Mobile Devices, Personal Computers (PCs), Servers, Mainframe Computers and Supercomputers, giving at least one example of each type of computer and stating what that computer might be used for?

**Rubrics (Scoring Guide)**

- Knowledge = 50%

- Comprehension = 50%