NATIONAL SCHOOL OF BUSINESS MANAGEMENT

BSc in Management Information Systems (Special) (NSBM)

BSc (Hons) in Management Information Systems (UCD)

BSc (Hons) in Software Engineering (NSBM)

BSc (Hons) in Computer Science (NSBM)

BSc (Hons) in Computer Networks (NSBM)

Year 1 Semester 2

12th December 2020

Computer Architecture

Instructions to Candidates

Answer All Questions.

Time allocated for the examination is three and half (3 1/2) hours.

Total number of pages – Five (05)

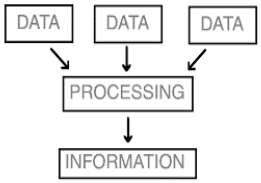
Use the provided answer booklet to write your answers and upload to the LMS as a PDF file within the stipulated time. This PDF file should be saved with your index no.

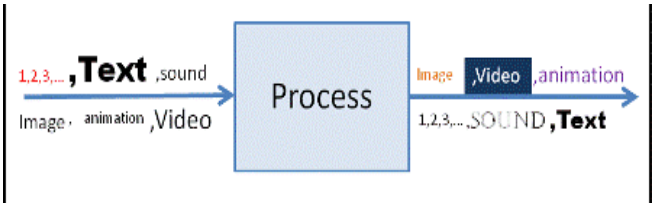
You are required to submit the answer file within the allowed timeframe, and no additional time is provided for submissions.

All the submissions will be checked for plagiarism. Plagiarism, collusion, and copying are serious offences in the university and serious penalties that would be imposed.

You are not allowed to publish or disseminate any part of the paper online or offline.

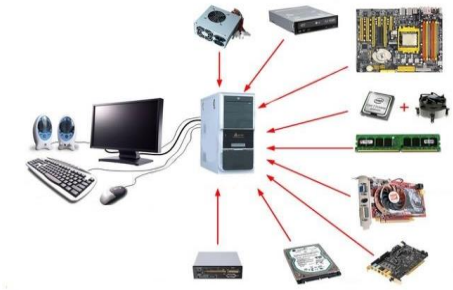
1. The following figures explain the relationship between data and information.
   (5*4 Marks= 20 Marks)





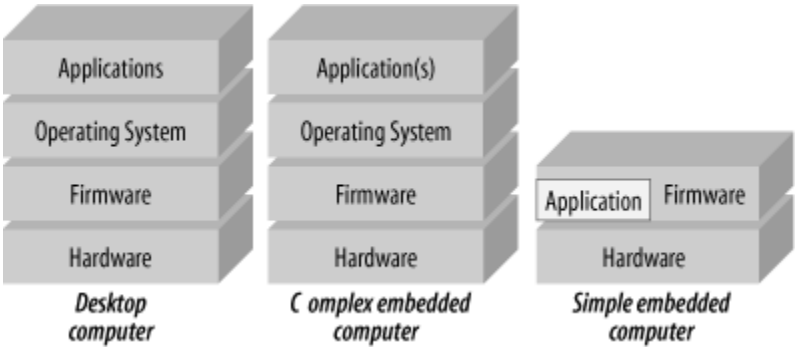
   a. Define “Data” and give three examples for data.
   b. Explain how what the information extract from the data are which indicate in the section “a”.
   c. Data Storing is a new trending business in the world. Give a few examples of which data are storing doing as a business.
   d. Explain how above the stored data (in section c) can be used to retrieve data and process them to extract the information out of that.
   e. Explain how all kind of data can be sent through a common network (Video, Text, Images etc.).

2. Consider the composition of the computer and answer the question below.

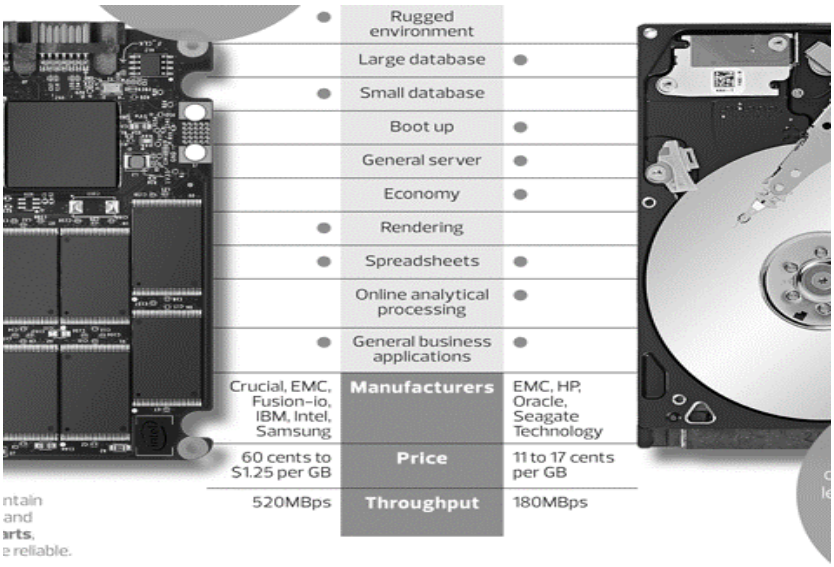


   a. Identify the most important part of the computer and explain their task and roll to up and running the computer for data today operations.
   b. Explain how the performance of the computer affected by the separate VGA card onboard VGA cards
   c. Explain how the power supply and cooling fans/cooling system can be affected to the performance of the computer.
   d. Explain different types of input and output ports and their applications

e. Explain the following computer types and suitable applications for each type.

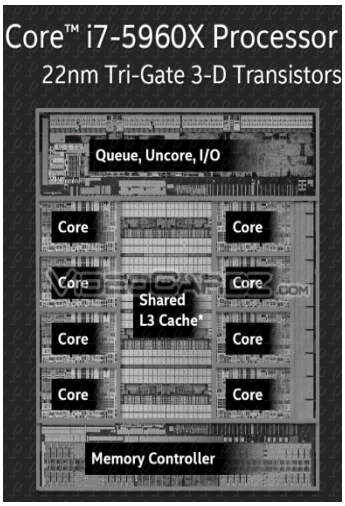


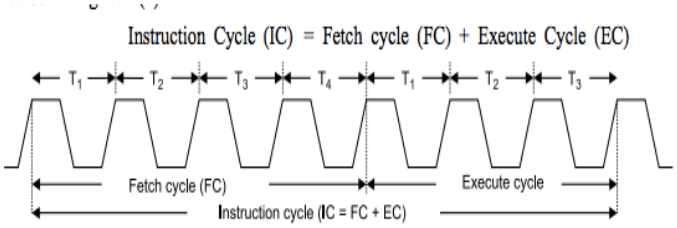
3. Answer the following questions related to memory elements and storage devices.
   a. Explain different between Volatile and Non-Volatile Memory and give suitable examples which you can find in the market.
   b. In the figure, it has shown SSD and Hybrid Type hard drives with a different application which they can use.
      Explain what the properties are each hard drive may have to select for each application.



   c. Explain the different between SRAM and DRAM in an architectural point of view. Discuss the application with their suitability for each application.
   d. Explain the reasons to consider the hard drive to be considered as Mini – Computer attached to the main computer or the survey.
   e. What are the factors that affected to a capacity of the Magnetic Hard Disk and give some suggestions to improve the capacity of the hard drive without changing the physical size?

4. Answer the following questions related to the processor of the computer.





a. What is the advantage of having several cores in the same processor?
b. In the image, it has shown the core i7 processor. Explain how they improve the speed of the processor using inbuilt hyperthreading technology.
c. What is the purpose of having cash memory inside the processor?
d. What is the purpose of the clock pulses and effecting how it has been connecting with the processor?
e. Explain different between GPU and CPU.

…….End of the Paper…….