

THE OPEN UNIVERSITY OF SRI LANKA
 B.Sc DEGREE PROGRAMME: LEVEL 03
 FINAL EXAMINATION: 2009/2010
 AMU 1190/NSU 1190: COMPUTER STUDIES
 DURATION: TWO HOURS (2 HOURS)



Date: 18th December 2009

Time: 1.30 pm – 3.30 pm

Answer FOUR questions ONLY.

Q1).

- i. What are the five major characteristics of a computer? Describe each of them.
- ii. Explain the anatomy of a computer.
- iii. Explain how the memory contributes to the performance of a computer.
- iv. "Modern microcomputers have a higher processing power than that of the earlier mainframe computers" comment on this statement.

Q2).

- i. Convert the following binary number (a) into its equivalent decimal form and the decimal number (b) into the equivalent binary form.

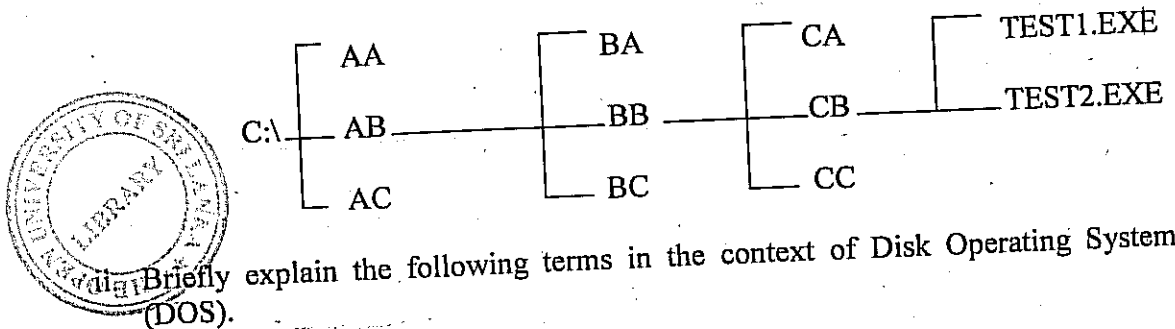
- a. $(101.011)_2$
- b. $(150.4375)_{10}$

- ii. How many Kilobytes are there in 1.28TB?
- iii. What is the difference between "Sequential Access" and "Random Access"?
- iv. State the purpose of having Inter Block Gaps (IBG) on magnetic tapes.

Q3).

- i. What are the two main categories of Software? Explain the importance of each category in brief.
- ii. Write two application software used in manufacturing industries? Describe the advantages of using them.
- iii. What are the four components of System Software? Explain the role of each component.
- iv. "The prices of hardware degrade every day in comparison with prices of software" Comment on this statement.

- Q4).
i. Write suitable MS-DOS commands to create the following directory structure.



Briefly explain the following terms in the context of Disk Operating System (DOS).

- File
 - Directory
 - Internal DOS commands
 - FAT
- iii. What are the steps has to be followed when you copy the contents of one diskette to another?

- Q5).
i. Compare and contrast Windows and Linux operating systems.
- ii. What do you understand by the term "node" in the context of computer networking?
- iii. "The use of on-line Streaming videos (ex: YouTube) and Chat (ex: Skype) facilities over the Internet is harmful for University students" Do you agree with this statement? Justify your answer.

- Q6).
i. What are the five essential steps in a standard program development process?
- ii. What do you mean by the term "Algorithm"?
- iii. Draw a flowchart and write the pseudo code to input subject marks of 30 students and to output the number of fail and pass students. It should validate the marks within the range 0 and 100. The pass mark is 40.

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