University of Ruhuna - Faculty of Technology

Bachelor of Engineering Technology Degree

Level 1 (Semester 1) Examination - November 2019

Course Unit: TMS1132 - Computer Fundamentals & PC Applications (Theory)

Time Allowed: 1 hour

Answer ***all*** **two (02)** questions

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1)

a)

i) Briefly explain the difference between data and information.

ii) Specify the five (5) basic components of a computer system.

iii) Name two (02) types of Random Access Memory and write a brief description of each of them.

b) Briefly explain the Client-server Architecture.

c)

i) How do you define the term **Network** in the field of computing?

ii) A network can be categorized based on its size, its ownership, the distance it covers, and its communication medium. Name three (3) types of Network and discuss the differences based on the above factors among them.

d)

i) History of computer development divided into five generations. List down these generations and explain the technologies used in each generation.

ii) The computers can be classified on the basis of their size, functionality, and data handling. Give three (3) examples for each classification.

Cont...

2)

a)

i) Computer operating systems can be categorized by technology, ownership, licensing, working state, usage, and by many other characteristics. List down the three (3) types of operating systems.

ii) Write down five (5) main functions of an operating system.

iii) Give five (5) examples for Utility Programs.

b)

i) Name three (3) types of data transmission modes and describe briefly each of them.

ii) Briefly describe the Peer-2-Peer Network.

iii) There are five basic network topologies. They are: mesh, star, tree, bus and ring. Briefly explain two (2) of them.

c)

i) Briefly describe three (3) key security objectives of computer security.

ii) It is still difficult to design a system that comprehensively prevents security faults. But, there are good practices that can follow to ensure security of the systems. State five (5) fundamental security design principles you should follow when ensuring the security of a system.

d)

i) Briefly describe the term "Intellectual Property" using examples (at least three (3) examples).

ii) There are many types of computer crimes. Computer crime is an act performed by a knowledgeable computer user that illegally browses or steals a company's or individuals private information. Describe any three (3) of these computer crimes briefly.

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