THE OPEN UNIVERSITY OF SRI LANKA
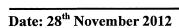B.Sc. DEGREE PROGRAMME: LEVEL 03
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
FINAL EXAMINATION – 2011/2012
CSU1179: INTRODUCTION TO INFORMATION SYSTEMS
DURATION: **TWO HOURS (2 HOURS)**

Date: 28th November 2012 | **Time: 9.30am-11.30am**

Answer Four Questions ONLY.

Q1.

i) Explain why database systems can be considered as an improvement to file processing systems.

ii) What are the three common problems in a classical file system? Explain them.

iii) Describe the difference between hierarchical and relational databases.

iv) Describe the advantages and the disadvantages of *relational databases* over object oriented databases.

v) Describe the following concepts using suitable examples.

a) Fields   d) Primary Key

b) Records   e) Query

c) File

Q2.

i) Compare the differences between **Real Time Systems** and **Online Systems.**

ii) What are the four types of Real Time Systems? Briefly describe each of them.

iii) Which software can be used for supporting management levels of an organization?

iv) Classify the following systems as Batch Processing Systems, Real Time Systems, or Online Systems, giving reasons for each choice.

a) Airline controlling system.

b) Chemical manufacture process control system.

c) Pre-paid card system.

d) Chatting system.

Q3.

i) What do you mean by a system? Justify your answer.

ii) Describe the difference between manmade systems and automated systems.

iii) All manmade systems are not automated systems. Justify your answer.

iv) What is the relationship between Data and Information? Explain data, information and knowledge by using examples.

Q4.

i) Describe the advantages and the disadvantages of **WWW** technology.

ii) What is application server based computing? Explain how it can be useful for the developing countries.

iii) Briefly describe the following terms

a) Web Client

b) Telemedicine

c) Web Application

d) Search Engines

iv) Briefly describe five facilities of the Internet.

Q5.

i) Distinguish between a Database and an Expert system.

ii) Describe two methods that can be used to develop an expert system. Which method is the easiest to develop an expert system? Justify your answer.

iii) **"To create a good expert system, the inference engine should be stronger."** Do you agree with the above statement? Justify your answer.

iv) What are the advantages of Hybrid systems? Justify your answer with suitable a example for each advantage you stated.

Q6.

i) What is a computer network? Explain how it can be useful for developing country?

ii) Describe the **advantages** and the **disadvantages** of File Transfer Protocol (FTP).

iii) Compare and contrast the following terms.

a) FTP and Telnet.
b) Website and Web application.
c) Dialup connection and Direct connection.
d) HTTP and TCP/IP.

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