

The Open University of Sri Lanka

B.Sc. Degree Programme :Level 03

Department of Mathematics and Computer Science

CSU1179: Introduction to Information Systems

Final Examination -2012/2013

Duration : Two Hours (2hours)



Date: 10th December 2013

Time: 9.30am-11.30am

Answer Four Questions only

01. i Explain why database systems can be considered as an improvement to file processing systems.
- ii What are the three common problems in classical file systems? Explain them.
- iii Describe the differences among *Hierarchical, Network, Relational, Object-oriented and Multi-media* databases.
- iv Describe the following terms using suitable examples:
- (a) File
 - (b) Record
 - (c) Field
 - (d) Primary key
 - (e) Query
02. i What is the Internet? Give two advantages and two disadvantages of it.
- ii Compare and contrast three types of computer networks.
- iii What are the two forms of writing IP addresses?
- iv What are the two types of Internet connections?
- v Write two examples for *List servers* from Sri Lanka.
- vi Give five examples for Internet protocols.
- vii What is a node? What are the two types of nodes? Briefly describe them.
- vii Briefly describe the following terms;
- a) Agent
 - b) HTML
 - c) Web URL
 - d) Mozilla Firefox

03. 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 example for each advantage you stand.
04. 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.
- 05(a). It has been decided to develop a Computer Network connecting all regional centres and study centres of the Open University. Describe how you would advice the design of the network in terms of geographical distribution of the Network connection to the and Network topology.
- (b) Explain how you can use the proposed network architecture for effective delivery of OUSL programmes. You should explain at least THREE expected services on the Network and suitable Internet technologies to provide these services.
- (c) Describe at least THREE possible limitations when using the proposed network for delivery of courses in the Open University.

06.(i) What is a *system*? Briefly explain in your own words.

(ii) Write the *Yourdon classification of systems*. Compare and contrast those categories.

(iii) By using the following table describe what are *Data, Information and Knowledge*.

Pet	Pet's name	Age	Sex
Cat	Tommy	1	Male
Dog	Buster	2	Male
Cat	Honey	3	Female
Dog	Rex	1	Male

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