Uva Wellassa University of Sri Lanka
Faculty of Science and Technology
Industrial Information Technology Degree Program
3rd Year 2nd Semester Examination – August/September 2014

Uva Wellassa University

CST 324 - 2 Middle-ware Architecture

Number of questions: Four (4)
Answer all questions
Time allocation: Two (02) hours
Total mark: 100

1.	a.	Briefly describe the term **middleware** using an example.	(05 mark)
	b.	What is **fault tolerance** in distributed computing?	(05 mark)
	c.	What are the issues in distributed computing?	(05 mark)
	d.	What are the drawbacks of legacy applications? How can they be overcome?	(10 mark)
2.	a.	Describe the advantages and disadvantages of middleware.	(04 mark)
	b.	How do different components communicate in component-based architecture?	(08 mark)
	c.	Discuss the impact on communication system of adding several lays of middleware.	(05 mark)
	d.	Why do we use a proxy in Client-Server communication?	(08 mark)
3.	a.	Describe the best method of managing the processes by a server, which has many client requests.	(08 mark)
	b.	Describe the synchronous and asynchronous models of communication.	(05 mark)
	c.	Where can we have failures in Client-Server communication?	(04 mark)
	d.	Describe the terms **hard-binding** and **late-binding** in Client-Server communication. What are the additional services needed for late-binding?	(08 mark)
4.	a.	Define a sample protocol file in a Remote Procedure Call (RPC) application.	(10 mark)
	b.	Describe the term **contextual names** giving advantages of it.	(05 mark)
	c.	What is a **context graph**? List two operations in the context graph.	(02 mark)
	d.	Describe Common Object Request Broker Architecture (CORBA) architecture. How does CORBA differ from Remote Method Invocation (RMI)?	(08 mark)