

THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF COMPUTER SCIENCE
B.Sc. DEGREE PROGRAMME 2016/2017
FINAL EXAMINATION
CPU3149: WEB TECHNOLOGIES
DURATION: TWO HOURS ONLY (2 HOURS)



02nd August, 2017

Time: 9.30 a.m. to 11.30a.m.

Answer **FOUR** Questions **ONLY**.

Q1). Education is a primary need of the society. The way we use to learn can be improved with the use of information technology.

- i. Describe briefly how we can use the Internet together with server-client architecture to improve the conventional learning process.
- ii. What is the role of server computer and client computers in the answer for section (i) above?
- iii. List two characteristics for each email protocol for sending and receiving emails.
- iv. What will be the ideal client model for the Internet based learning? Briefly explain your answer.

Q2). You have been asked to create a website to maintain the information of the victims and damaged properties of the natural disasters in the country.

- i. List five standard HTML tags and briefly describe how they can be utilized for the above purpose.
- ii. List five web designing fundamentals you need to follow with this website and briefly explain the necessity of them.
- iii. Explain how we can use web animations to improve the quality of information on the website.
- iv. What kind of user interactions or features are essential for this website? List five of them.
(Make any assumptions if only necessary)

Q3). Suppose that you are operating a web technology company where you provide a web based solution for vehicle renting companies.

- i. Identify and describe a feature in your product which can be benefited from client side programming using JavaScript. (Make any assumptions if only necessary)
- ii. Explain a scenario where you will need server side programming when providing a certain feature for the solution consumers.

- iii. What is the advantage of using CSS technology in your solution? Describe using three (3) such advantages.
- iv. Briefly describe two facts related to web development to be considered when developing your solution. State the importance of them with respect to your product.

Q4). Centralized transport information system is the backbone of a well-planned country.

- i. Suggest what are the information we can store in an XML file and write down the XML structure for it. We use XML mainly to store read-only data.
- ii. Opposed to XML, a database can be more flexible with writing and reading data. Explain briefly how can we connect a database to our web application, insert some data to a suitable data table and retrieve some data from the database to display on a web page. Use imaginary host, username, password, database name and table names.
- iii. How can we use webservices to increase the availability of the information on the above system? Explain briefly.
- iv. List the steps required to display information on a browser when a user requests a certain page.

Q5). A leading fashion store has developed an e-commerce solution to attract more customers.

- i. List the steps required for hosting the web application.
- ii. Briefly explain how search engines recommend/list the website when a person searches for fashion items.
- iii. Briefly explain three methods to increase the website rank on search engines.
- iv. List five security vulnerabilities that can make the e-commerce site insecure to operate.

Q6). A large product distribution network has all their shipping and logistic details online.

- i. How can they improve the distribution process using a mobile application? Explain briefly.
- ii. List five facts to be considered when developing a mobile app for the distribution team.
- iii. Describe two advantages and two disadvantages of using a mobile app for this business.
- iv. Briefly describe three best practices for maintaining their web based backend system.

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