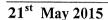THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
B.Sc. DEGREE PROGRAMME 2014/2015
FINAL EXAMINATION
CPU3149: WEB TECHNOLOGIES
DURATION: **TWO HOURS ONLY (2 HOURS)**

21ˢᵗ May 2015 | **Time: 9.30 a.m. to 11.30a.m.**

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

Q1). Banking has evolved a long way through the history. Nowadays information technology plays a huge role in banking

    i. List and describe briefly two advantages of having a client-server model for the IT system of a bank.

    ii. List four drawbacks of using a client-server model.

    iii. What are the email protocols that can be used for staff communication? Describe briefly your selections.

    iv. If the branches of the bank need to upload a file which has all the transactions, at the end of each business day, what is the best choice of protocol? Explain your answer briefly.

    v. Using an example briefly explain which client model can be used as an interface to the banking system, from Thin, Thick and Smart options.

Q2). A thorough understanding of the web technology fundamentals is necessary to succeed in web industry.

    i. Describe briefly the two areas of web development, including at least two technologies used for each.

    ii. Explain with examples, four web design fundamentals that will improve the user experience.

    iii. Briefly explain two considerations you have to make when selecting a web animation technology.

    iv. What are the considerations to be made when selecting the serever side and client side development technologies? Explain two considerations briefly.

    v. Why it is important to use a web development tool rather than using a basic editor like notepad. Explain your answer with proper examples.

Q3). Search engines and optimizing your website for them is a must to keep the popularity of your website ahead of the others.

   i.   Suppose you operate an information website related to travel and tourism. What are the benefits you receive through search engine activities? Describe two of them briefly.

   ii.   List the steps of the process, how a website URL gets listed on some search engine results.

   iii.   List four approaches of increasing the possibility of getting listed on search engine results.

   iv.   Briefly explain two disctinct methods of optimizing a photographic website for the search engines.

   v.   When choosing a development team to optimize your website for search engines what are the qualities you look at them. Describe briefly two of them.

Q4). Suppose you are operating an information website for retail prices of consumer goods.

   i.   Briefly explain two advantages of storing your information on XML.

   ii.   Develop an XML structure which can be used to store retail prices of vegetables and fruits from different areas of the island.

   iii.   Explain briefly how you can monetize (give a commercial value) your information using web services.

   iv.   Explain the process of accessing and using a web service available on a remote server.

   v.   Briefly explain four security vulnerabilities that can occur on your website.

Q5). The ultimate task of web design and development will be hosting the product you made. For different development technologies, there are matching hosting options.

   i.   As a developer what are the advantages of using WAMP/LAMP. Explain two of them briefly.

   ii.   What is the web server software we use in Windows Server technologies? Briefly describe one disadvantage of the above server.

   iii.   Explain using two reasons why most of the people are not interested in hosting websites on their own servers, but get the service from hosting companies.

iv. Briefly explain how a 'web page request' from a browser locates the IP of the server where the particular domain is hosted.

v. In web development, why it is important to follow the best practices. Explain one of the best practices briefly.

Q6). Smart phones and other mobile devices have become the largest consumers of the Internet. New versions of markup and scripting languages are released to get the most out of these devices

i. Is it possible to browse a website made for desktop computers using a smart device? Justify your answer with two reasons.

ii. Name and explain one design consideration and one development consideration for mobile compatible websites.

iii. What would you suggest for an online news service, a mobile app or a mobile website? Explain your answer.

iv. Explain two features available with HTML5, which enhance the mobile user experience.

v. Cascading style sheets (CSS) make the development faster. Do you agree with this or not. Explain your answer briefly.

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