# UNIVERSITY OF BOLTON

# RAK ACADEMIC CENTRE

# BSC (HONS) COMPUTING

# SEMESTER TWO EXAMINATION 2018/2019

# WEB AND SYSTEMS BASED PROGRAMMING

# MODULE NO: CPU6003

Date:  Friday 24th May 2019                    Time: 1:00pm – 3:00pm

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**INSTRUCTIONS TO CANDIDATES:**          There are **FOUR** questions on this paper.

Answer **ALL** questions

All questions carry equal marks.

Marks for parts of questions are shown in brackets.

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**Question 1**

    a.  Critically appraise the advantages and disadvantages of Ecommerce.

**(7 marks)**

    b.  Suggest the technology with which two processes (client and server) located on two machines communicate with each other.

**(2 marks)**

    c.  Draw a diagram of steps involved in a RPC.

**(3 marks)**

    d.  Compile the role of Client Stub in a RPC.

**(5 marks)**

    e.  Compare and contrast RPC/literal and RPC/encoded SOAP messages.

**(8 marks)**

**Total 25 marks**

**Question 2**

    a.  Define Cloud Computing. Elaborate the characteristics of a Cloud environment.

**(6 marks)**

    b.  Illustrate with a diagram, the Service Oriented Architecture.

**(3 marks)**

    c.  Compare between XML and HTML.

**(4 marks)**

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**Question 2 continued**

d. Describe Web Service.

**(2 marks)**

e. Evaluate the role of UDDI. Identify the types of information in the UDDI registry.

**(6 marks)**

f. Analyse the need for Integrating Data between from various data sources into a web-based application.

**(4 marks)**

**Total 25 marks**

**Question 3**

a. Hotel Kohinoor is a restaurant in Sharjah. Twiggy is a mashup company which represents a common platform for customers to search restaurants in town and place order from them. Kohinoor has collaborated with Twiggy to expand its business. Twiggy utilizes the webservice to connect to the different restaurants and communicate by exchanging XML messages. The XML message from Kohinoor to Twiggy has Meal Description of different meals. Each Meal has information like: MealId, MealName, and Price. Write an XML file for the Meal Description sent from Kohinoor to Twiggy which has details of meals. Provide data for 2 meals only.

**(10 marks)**

b. Describe the structure of a SOAP message and with an example. Explain the purpose of each of the components.

**(15 marks)**

**Total 25 marks**

**Please turn the page**

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**Question 4**

a. KMART is a hypermarket located in Ras al Khaimah. It provides salary to the intern salesmen based on commission made by him/her on online sales amount made by the intern. KMART wishes to add a feature for the interns to check their commission anytime from anywhere. They have approached your Web Development Company to add the feature as a webservice. Write a SERVER.PHP file for the given scenario. Assume the commission rate is fixed to 0.05 AED on the sale amount made.

**(6 marks)**

b. With reference to part **'a'**, write a PHP web service client script named CLIENT.PHP to test the operation of the web service function.

**(4 marks)**

c. In Electronic Commerce System, which tiered architecture is used. Illustrate with a diagram, the interaction between clients and servers in such an architecture. Identify the main components and their functions.

**(7 marks)**

d. Mention the various methods of developing application. Identify a less risky outsourcing option. Provide an example of a web service that hosts corporate Web sites and Webstores at various service levels.

**(8 marks)**

**Total 25 marks**

**END OF QUESTIONS**