Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESI 2014/2015

COURSE NAME	:	WEB SERVICES TECHNOLOGY
COURSE CODE	:	BIW 20404
PROGRAMME	:	2 BIW
EXAMINATION DATE	:	JUNE 2015 / JULY 2015
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1 (a) Describe the Web Service and discuss **TWO (2)** of its advantages.
(6 marks)

(b) Give **TWO (2)** examples of Web Service that you have learned in the lecture/lab.
(4 marks)

Q2 (a) In your own words, define the XML Schema.
(4 marks)

(b) List down **TWO (2)** components in XML Schema and what each of it represents.
(4 marks)

Q3 (a) Illustrate the Web Service architecture using diagram and describe each of the stacks.
(6 marks)

(b) Given an XML Schema in Figure **Q3(b)(i)** and an XML document in Figure **Q3(b)(ii).** Apply the XML Schema into the XML document. Find **THREE (3)** mistakes from Figure **Q3(b)(ii)** based on Figure **Q3(b)(i)** and give suggestions to correct the mistakes.

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="Person">
 <xs:complexType>
 <xs:sequence>
  <xs:element name="Info">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="First" type="xs:string"/>
        <xs:element name="Middle" type="xs:string"
              minOccurs="0"/>
        <xs:element name="Last" type="xs:string"/>
        <xs:element name="Age" type="xs:int"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="Phone" type="xs:int"
maxOccurs="2"/>
  <xs:element name="Address" type="xs:string"/>
 </xs:sequence>
 </xs:complexType>
 </xs:element>
</xs:schema>
```

FIGURE Q3(b)(i)

```
<Person>
<Info>
     <Last>Abu</Last>
     <Middle>A.</Middle>
     <First>Ali</First>
     <Age>Twenty two</Age>
     <Phone>011111112</Phone>
     <Phone>073337686</Phone>
     <Address>Parit Raja, Batu Pahat, Johor</Address>
</Info>
</Person>
```

FIGURE Q3(b)(ii)

(6 marks)

(c) Demonstrate using a complete SOAP message, a request for an operation to get the current weather given the latitude and longitude of the location. You may use your own data for the request.

(4 marks)

Q4 (a) Give **FOUR (4)** comparisons of network level and application level security mechanism.

(10 marks)

(b) (i) Sketch a digram to show the processes to access database through JDBC-ODBC.

(ii) Explain briefly the diagram you draw in **Q4(b)(i).**

(8 marks)

(c) Outline the steps for XML Encryption.

(8 marks)

Q5 Kentucky Fried Chicken (KFC) is one of the largest fast-food restaurants in the world. With plan to ensure timeliness in the delivery of the ordered food items, the management of the Fast Food Company makes a plan to develop an efficient Web Service for their online ordering system. Assume that you are hired to involve in the whole development of the web service.

(a) Using your own words, propose an application or application component which you think will help the company to solve the above requirement. Describe in detail.

(5 marks)

(b) Develop a complete Web Services Description Language for your proposal in **Q5(a)**.

(4 marks)

(c) Write a SOAP message to request the operation in **Q5(b)**.

(5 marks)

(d) Interpret the usage of database in the web service by writing a sample of database access using your chosen programming language. Support your answer with a matching table of data.

(6 marks)

- END OF QUESTION –