



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2013/2014 – 3rd Year Examination – Semester 5

IT5404: Internet Application Development
Structured Question Paper

09th March, 2014
(TWO HOURS)

To be completed by the candidate

BIT Examination Index No:

Important Instructions:

- The duration of the paper is **2 (two) hours**.
- The medium of instruction and questions is English.
- This paper has **4 questions** and **13 pages**.
- **Answer all questions.** All questions **do not** carry similar marks.
- **Write your answers** in English using the space provided **in this question paper**.
- Do not tear off any part of this answer book.
- Under no circumstances may this book, used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper.
If a page is not printed, please inform the supervisor immediately.

Questions Answered

Indicate by a cross (×), (e.g.

×

) the numbers of the questions answered.

To be completed by the candidate by marking a cross (×).	Question numbers		
	1	2	3
To be completed by the examiners:			

- 1) (a) Detailed here are similarities and differences between web pages and web services. Complete the table given below;

(5 Marks)

ANSWER IN THIS BOX

Characteristics	Web Pages	Web Services
Transport mechanism		
URLs		
Message Format		
Information types		
Remote Application communication		

- (b) What is meant by the Web Service Technology Stack?

(5 Marks)

ANSWER IN THIS BOX

ANSWER IN THIS BOX

- (c) What are the layers that make up a web service? Briefly explain each one of them.

(10 marks)

ANSWER IN THIS BOX

Continued

[illegible]

- (d) For each of the layers explained in (c) above, List at least one Protocol/Standard that defines the layer.

(5 marks)

ANSWER IN THIS BOX

- 2) (a) Outline the phases of the Web Service Development Life-cycle and briefly explain the task of each phase.

(10 Marks)

ANSWER IN THIS BOX

Continued

- (b) List five (05) well known XML-based languages that are supported either on the web or in major XML-based applications, along with the kinds of information they represent.

(5 Marks)

ANSWER IN THIS BOX

- (c) What is meant by describing XML as a meta-language?

(5 Marks)

ANSWER IN THIS BOX

- (d) The key to XML's accuracy lies in a few simple rules. List five (05) conditions for a document to be well-formed in XML.

(5 Marks)

ANSWER IN THIS BOX

[illegible]

- 3) (a) What are the three typical steps involved in working with a data file in PHP?

(3 Marks)

ANSWER IN THIS BOX

- (d) Briefly explain the values which can be replaced by “r” in the following code;

```
$fp = fopen("../abc/data.txt", "r");
```

(5 Marks)

ANSWER IN THIS BOX

value	Description

- (e) What would be the output of the following PHP code?

```
<?php
for($x=1; $x<3;$x++)
{
    for ($y=1; $y<5;$y=$y + 2)
    {
        for($z=5; $z>3;$z - -)
        {
            echo ("X holds: $x, Y holds:$y, Z holds:$z <br>");
        }
    }
}
?>
```


(b) Explain the following XML code using the relevant line numbers.

```
1.    <?xml version="1.0" encoding="ISO-8859-1"?>
2.    <note>
3.        <name>Nimal Perera</name>
4.        <no>35</no>
5.        <street>Saranankara Road</street>
6.        <town>Nugegoda</town>
7.    </note>
```

(7 Marks)

ANSWER IN THIS BOX

(c) What is the purpose of the DTD in XML? Give the DTD for the example in part (b).

(5 Marks)

ANSWER IN THIS BOX

- (d) What are the three main components of a web service that the Web Services Description Language (WSDL) describes?

(3 Marks)

ANSWER IN THIS BOX

- (e) What is the role of WSDL in web Services?

(5 Marks)

ANSWER IN THIS BOX
