



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY

Academic Year 2010/2011 – 2nd Year Examination – Semester 4

IT4104: Programming II
PART 2 - Structured Question Paper

6th August 2011
(ONE HOUR)

To be completed by the candidate

BIT Examination Index No:

Important Instructions:

- The duration of the paper is **1 (one) hour**.
- The medium of instruction and questions is English.
- This paper has **2 questions** and **8 pages**.
- **Answer both questions. Questions do not carry equal 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 (x), (e.g. X) the numbers of the questions answered.

To be completed by the candidate by marking a cross (x).	Question Numbers	
	1	2
To be completed by the examiners:		

1)

- a) Discuss in short the differences between Binary Trees and Binary Search Trees. (12 Marks)

ANSWER IN THIS BOX

Index No

- b) Write segments of codes in Java to implement four (04) major functions which can be seen in a Stack data structure.
(28 marks)

ANSWER IN THIS BOX

i)

ii)

Index No

iii)

iv)

iv)

- c) Illustrate diagrammatically how to use set of stack data structures to add the following 2 numbers.

592
3784

(20 marks)

ANSWER IN THIS BOX

- 2) | a) Explain a Heap in short by using a diagram. (20 marks)

ANSWER IN THIS BOX

b) Explain a priority queue data structure in short.

(20 Marks)

ANSWER IN THIS BOX
