



**EASTERN UNIVERSITY, SRI LANKA**  
**DEPARTMENT OF MATHEMATICS**  
**SECOND EXAMINATION IN SCIENCE -2010/2011**  
**FIRST SEMESTER (March/April., 2013)**  
**CS 251 – PRACTICAL WORK ON CS 201**  
**PROPER & REPEAT**

ANSWER ALL QUESTIONS

TIME ALLOWED: 02 HOURS

- 1) *Stack* is one of the data structure.  
Implement the codes for the following *Stack* operations which:
- Check whether the *Stack* is empty;
  - Return front element of the *Stack*;
  - Add an element to the *Stack*;
  - Remove an element from a *Stack*.
- a) Implement the C++ code to determine the result of given postfix expression using *Stack* data structure. Let assume the following linear array contains the postfix expression.

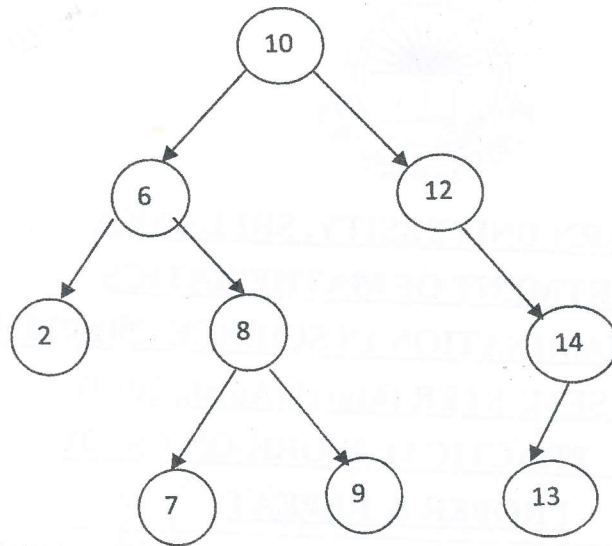
4	2	3	+	*	5	/
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- b) Modify the above code to determine the result of given prefix expression.

/	*	4	+	2	3	5
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[50 Marks]

2). Consider the binary tree given below.



Implement a C++ program for the following the binary tree Traversal which:

- a) In-Order;
- b) Pre-Order;
- c) Post-Order.

[25 Marks]

3). Implement a C++ program to sort the following numbers in a descending order using *quick sort* technique.

8	6	12	24	5	10	82	32	4
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[25 Marks]