****Kathmandu BernHardt College****

**Bafal, Kathmandu**

**First Unit Test Examination -2069**

**Time: 1 hour Level: B.Sc CSIT (2nd Semester) FM: 20**

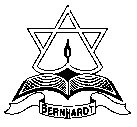
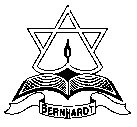
**Date: 2071/03/17 PM: 10**

**Subject: *Data Structure and Algorithm*** [**Set-A**]

*Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks*

1. What is difference between an array and structure? Write a C function to search a value in given array.
2. What is data structure? Why it is important to study data structure?
3. Define stack as ADT. Write an algorithm to pop from the stack.
4. Define the term Big O. What is its use?
5. Convert following expression to equivalent Postfix notations.

A \* B/D + (C - D / E)\*F

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**Subject: *Data Structure and Algorithm*** [**Set-B**]

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**Attempt all the questions.**

1. Define the term array. Write a function to insert a new value into an array at given position.
2. What is an algorithm? What are the features of algorithm?
3. What do you mean by big Oh notation? Define the terms Best, Worst, and Average-Case Complexity of an algorithm.
4. What is stack? Write an algorithm for pushing an item into a stack.
5. Convert following expression to equivalent Postfix notations.

(A + B) \* C - (D - E) $ (F + G)