1 Quotation an Citation (4 marks)

1.1 Quotation (2 marks)

The margins of the quotation environment are indented on both the left and the right. The text is justified at both margins. Leaving a blank line between text produces a new paragraph. The package **csquotes** offers a multilingual solution to quotations, with integration to citation mechanisms offered by BibTeX. This package allows one for example to switch languages and quotation styles according to babel language selections.

> "Unlike the quote environment, each paragraph is indented normally. Its important to remark that even if you are typing quotes on English there are different quotation marks used in English (UK) and English (US)."

1.2 Citation (2 marks)

Latex [1] is a document preparation system for typesetting program. It is used to create different types of document structures. A Latex file (.tex) is created using any text editor (vim, emacs, gedit, etc.). There are also many LaTeX IDEs like Kile, TexStudio, etc.. The Latex code is then compiled which creates a standard (.pdf) file. Thus, the presentation of the document does not change on different machines.
Type style[2] is used to indicate logical structure. Emphasized text appears in italic style type and input in typewriter style. Type style is specified by three components: shape, series, and family.

There are two ways of producing a bibliography[3]. You can either produce a bibliography by manually listing the entries of the bibliography or producing it automatically using the BibTeX program of LaTeX. The bibliography style can be declared with bibliographystyle command, which may be issued anywhere after the preamble. The style is a file with .bst extension that determines how bibliography entries will appear at the output, such as if they are sorted or not, or how they are labeled etc. The extension .bib is not written explicitly. There are many standard bibliography style files. Two of them that are compatible with IIT thesis manual are plain.bst and alpha.bst. They are part of the LaTeX package; a student does not need to download it. The plain.bst and alpha.bst styles are explained below. The symbols in a math formula fall into different classes that correspond more or less to the part of speech each symbol would have if the formula were ex pressed in words. Certain spacing and positioning cues are traditionally used for the different symbol classes to increase the readability of formulas. [4]

My citations are in proper order as per references ref1, ref2, ref3, and ref4.

2 Algorithm and Pseudo Code (22 marks)

2.1 Listing (10 marks)

```
//Breadth First Search Function
void BFS(list<long long int> queue,long long int
    length
  ){
  long long int v ;
  if (queue.empty())
    return ;
  list<long long int>::iterator i;
  list<long long int> queue_temp;
  while(!queue.empty()){
    v=queue.front() ;
    queue.pop_front();
    for(i=adj[v].begin();i!=adj[v].end();i++){
      if(!pro_ver[*i]){
        result[*i]=length;
        queue_temp.push_back(*i);
        pro_ver[*i]=true;
        adj[*i].remove(v);
        }
      }
    }
  BFS(queue_temp , length+1);
}
```

2.2 Algorithmic (12 marks)

Algorithm 1: How to write algorithms

Input: A graph Graph and a starting vertex root of Graph
Output: All verticess reachable from root labeled as explored.

```
1  Breadth-First-Search(Graph, root):
2  for each node n in Graph : do
3  |   n.distance = INFINITY
4  |   n.parent = NIL
5  end
6  create empty queue Q
7  root.distance = 0
8  Q.enqueue(root)
9  while Q is not empty : do
10 |   current = Q.dequeue()
11 |   for each node n that is adj acent to current do
12 |   |   if n.distance == INFINITY then
13 |   |   |   n.distance = current.distance + 1 n.parent = current
14 |   |   |   Q.enqueue(n)
15 |   |   end
16 |   end
17 end
```