Section 1

Q2. Define binary search in details with example.

Answer:- Binary search is a fast search algorithm with run-time complexity O(log n). This ~~section~~ search algorithm works on the principle of divide and conquer.

How binary search work.

mid = low + (high - low)/2

Let see an example.

```
def binary search (arr, l, r, x);
    while l <= r;
    mid = l + (r-1) //2;
        if arr [mid] == x;
            return mid
        else if arr [mid] < x;
            l = mid +1
        else
            r = m - 1

result = binarysearch (arr, 0, len(arr)-1, x)

if result != -1:
    print (x, " is present at index
            % d " % d result)

else
    print ("element is not present in
            array");
```