Section-B

B.1

```
#includdl<bits/stdc++.h>
using namespace std;
int main(){
        int m,n,k;
        cin>>m>>n>>k;
        int a[m][n];
        for(int i=0; i<=m-1; i++){
                for(int j=0; j<=n-1; j++){
                        cin>>a[i][j];
                }
        }
        for(int i=0; i<=m-1; i++){
                for(int j=0; j<=n-1; j++){
                        if(a[i][j]==k){
                                cout<<"true"<<"\n";
                                cout<<i<<" "<<j;
                                break;
                        }
                        else{
                                continue;
                        }
                        cout<<"false";
                }
        }
}
```

B.3 (1) The various sensors are:-

LIDAR: (Light Detection and Ranging) Scanning the environment with infrared lasers.

CAMERA: captures visual data but does not work well in all weather conditions

INS: (Inertial Navigation System): Detect's car physical movements

GPS: To find the physical location of car

Sensor fusion: Process of combining sensor data such that data has less certainity that would be possible than individual sensors.

(2) The research paper proposes a method very which finding T-shaped & +-shaped intersections infront of the vehicle using LIDAR point cloud intersection

- Because GPS, INS, GIS are not reliable

- It uses distance function versus angle of each beam to find intersections.

I think this is quite innovative because using openCV in such situations is very hard. This method has its flaw. It is relatively expensive and harder to repair if any error occurs.