Name - Ashish Parmar
Roll no - 112102
Subject - Computer Graphics
Sec - A

Ans 1)

```
#include <stdio.h>
#include <graphics.h>
int main()
{
 int round(float num)
 {
  return num<0 ? num-0.5 : num+0.5;
 }
 int x1=100,x2=250,y1=100,y2=250,step;
 int gd=DETECT,gm;
 float x,y,m;
 int dx=x2-x1;
 int dy=y2-y1;
 m=dy/dx;
 if(dx>dy)
  step=dx;
 else
  step=dy;
```

```
initgraph(&gd, &gm, "");
outtextxy(x1, y1, "A");
outtextxy(x2, y2, "B");
putpixel(x1, y1, RED);
x = x1, y = y1;
while(step > 0)
{
  if(m < 1)
  {
    x = x + 1;
    y = y + m;
  }
  if(m >= 1)
  {
   x = x + 1/m;
   y = y + 1;
  }
putpixel(round(x), round(y), RED);
 step--;
 }
getch();
return 0;
}
```

DDA Algorithm

Step 1 - Stard Algorithm

Step 2 - Declare x1, y1, x2, y2, dx, x, y as integer variables.

Step 3 - Enter values x1, y1, x2, y2

Step 4 - Calculate dx = x2 - x1

Step 5 - Calculate dy = y2 - y1

Step 6 - If ABS (dx) > ABS (dy)
Then step = abs (dx)
Else

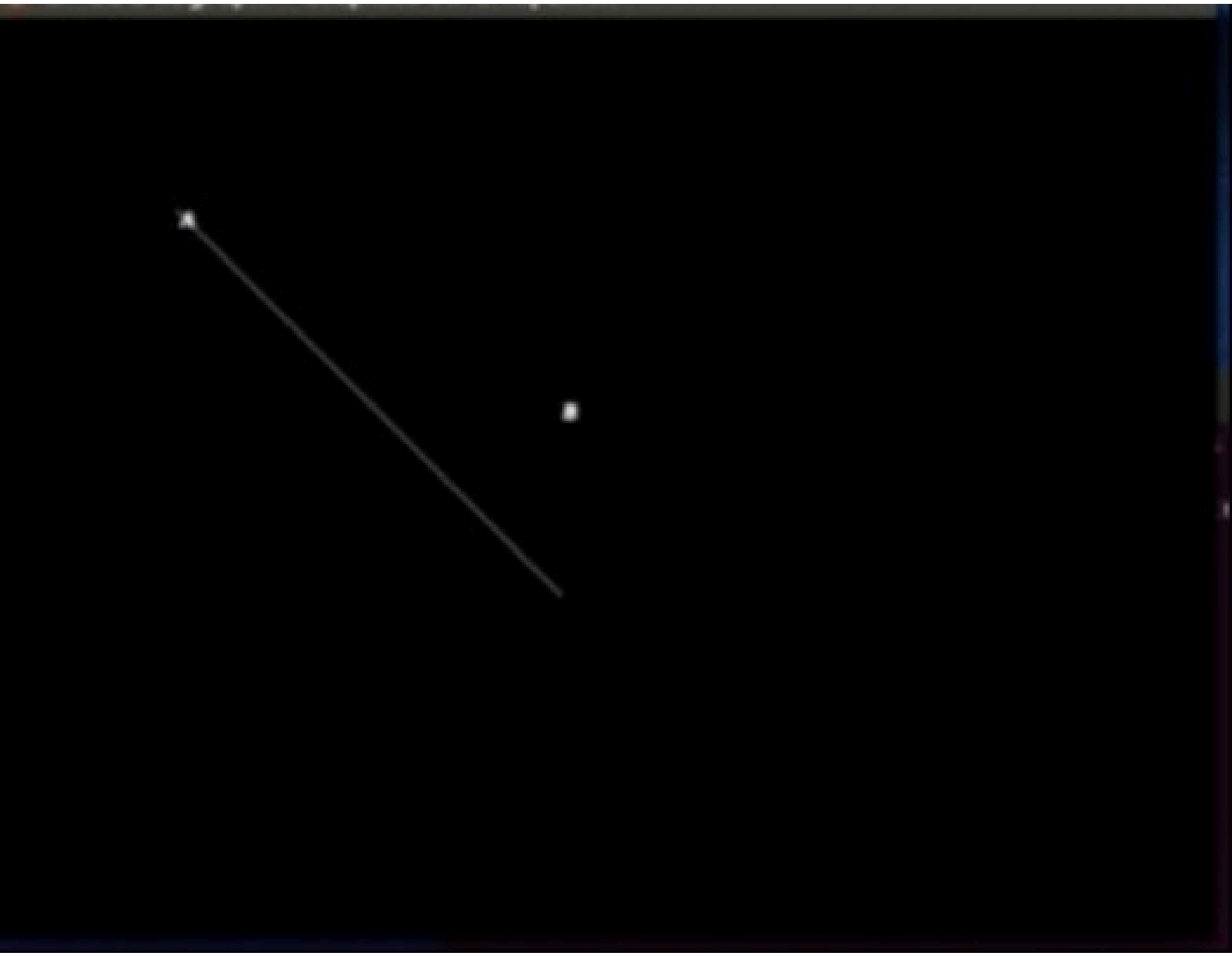
Step 7 - xinc = dx / step
yinc = dy / step
assign x = x1
assign y = y1

Step 8 - set pixel (x, y)

Step 9 - x = x + xinc
y = y + yinc
Set pixels Round (x), Round (y)

Step 10 - Repeat Step 9 until x = y2

Step 11 - End Algorithm.


A
B