Name- Kritika Gaur.

Course- BCA '6'-C

Roll no- 17(1121075)

Subject- Comp. Graphics.

Paper Code- TBC602

Date- 16/06/2021

Q-2 Mid point Circle Algorithm.

Step 1: Put $x=0$, $y=r$ in equation 2

We have $p=1-r$

Step 2: Repeat steps while $x \leq y$.

Plot (x, y)

If $(p<0)$

Then set $p = p+2x+3$.

Else

$p = p+2(x-y)+5$.

$y = y-1$ (endif).

$x = x+2$ (end loop).

Step 3: End.

Program:

```
#include<graphics.h>.
#include<stdlib.h>
#include<math.h>.
#include<conio.h>.
#include<stdio.h>.
#include<iostream.h>.
class bresen
 {
  float x, y, a, b, r; p;
  public:
  void get();
  void cal();
```

```
};
Void main()
{
 bresen b;
 b.get();
 b.cal();
 getch();
}
Void bresen::get().
{
 cout<<"Enter Center and radius:";
 cout<<"ENTER (a,b)";
cin>>a>>b;
 Cout<<"Enter r";
  cin>>r;
}
Void bresen::cal()
{ int gdriver = DETECT, gmode, errorcode;
 int midx, midy, i;
 initgraph(&gdriver, &gmode, "");
errorcode = graphresult();
if(errorcode != grOk).
{ printf("Graphics error: %s \n", grapherrormsg
                                  (errorcode));
 printf("Press any key to halt:");
 getch();
 exit(1);
}
```

```
x=0;
y=r;
putpixel (a, b+r, RED);
putpixel (a, b-r, RED);
putpixel (a-r, b, RED);
putpixel (a+r, b, RED);
p = 5/4 - r;
while (x<=y).
{ if (p< 0)
  p+= (4*x)+6;
else.
  {
  p+= (2*(x-y))+5;
  y--;
 }
x++;
putpixel (a+x, b+y, RED);
putpixel (a-x, b+y, RED);
putpixel (a+x, b-y, RED);
putpixel (a+x, b-y, RED);
putpixel (a+x, b+y, RED);
putpixel (a+x, b-y, RED);
putpixel (a-x, b+y, RED);
putpixel (a-x, b-y, RED);
 }
}.
```