Course - B.C.A
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Answer P3

Program

```
#include<stdio.h>
#include<graphics.h>
void drawCircle(int x0, int y0,
 int radius
 {
 int x = radius;
 int y = 0;
 int err = 0;
 while(x>=y)
 {
putpixel(x0+x,y0+y,7);
putpixel(x0+y,y0+x,7);
putpixel(x0-y,y0+x,7);
putpixel(x0-x,y0+y,7);
putpixel(x0-x,y0-y,7);
putpixel(x0-y,y0-x,7);
putpixel(x0+y,y0-x,7);
putpixel(x0+x,y0-y,7);
 if (err<=0)
 {
 y+=1;
 err+=2*y+1;
 }
 if (err>0)
 {
 x-=1;
```

Always ahead.

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```
err = 2*r+1;
}}}
int main()
{
int gdrive = DETECT, gmode, errorcode,
    r, x, y;
printf("Enter co-ordinate of
 center (x and y): ");
scanf("%d%d", &x, &y);
initgraph(&gdrive, &gmode, "");
drawcircle(x, y, r);
delay(99999999);
 return 0;
}
```

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
$P = P+2(x-y)+5$
$y = y-1$ (end IF)
$x = x+1$ (end loop)

Step 3 - End

Always ahead