NAME → Anuj Dhasmana
Course → BCA
Section → A

Father's name → Devendra Dhasmana
Semester → 6th
Roll no → 1121021

Q7 →

Ans → DDA Algorithm

Step 1: calculate dx, dy

```
dx = x1 - x0;
dy = y1 - y0;
```

Step 2: Depending upon absolute value of dx & dy choose number of steps to put pixel as

```
steps = abs(dx) > abs(dy) ? abs(dx) : abs(dy)
Steps = abs(dx) > abs(dy) ? abs(dx) : abs(dy);
```

Step 3: calculate increment in x & y for each steps

```
x_inc = dx / (float) steps;
y_inc = dy / (float) steps;
```

step 4: // Put pixel for each step

```
x = x0;
y = Y0;
for (int i = 0; i <= steps; i++)
{
    Putpixel (X, Y, WHITE);
    X += x_inc
    Y += Y_inc;
}
```

Anuj

Program :- DDA

```
#include<stdio.h>
#include<graphics.h>
int main()
{
  int rou(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();
}
```