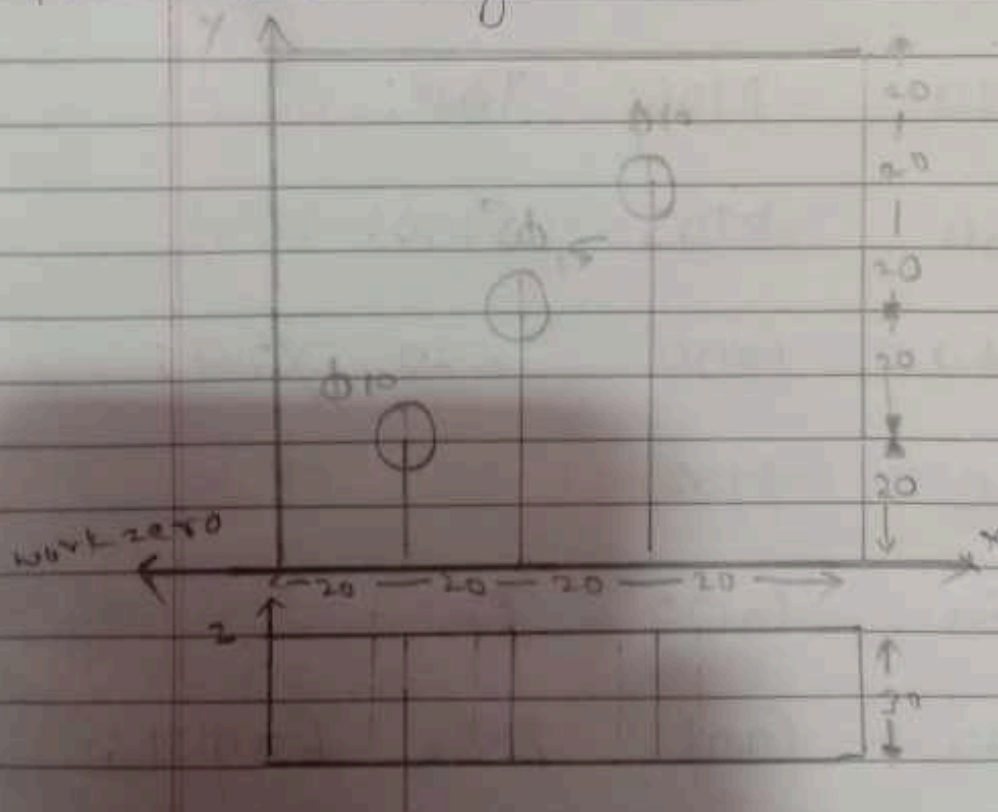


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Subject :- Manufacturing process ing  
III

Assignment 5 :- To develop a manual Part program of a given Component on CNC milling machine using G and M Code.

Part Drawing



## Absolute Co-ordinate System

Point	X	Y	Z
0	0	0	100
1	20	20	-32
2	60	60	-32
3	40	40	-32

Part program

O1010

N10 G90 G21 G98

N20 M06 T01;

N30 M03 S300;

N40 G00 X20 Y20;

N50 M08

N60 G00 Z5;

N70 G01 Z-32 F20.7;

N80 G00 Z5;



N90 G00 X60 Y60;

N100 G01 Z-32;

N110 G00 Z5;

N120 M05 M09;

N130 M06 T02;

N140 G00 X40 Y40;

N150 M03 S300;

N160 M08;

N170 G01 Z-32;

N180 Z5;

N190 G00 X0 Y0 Z100;

N200 M05

N210 M09

N220 M30

## Explanation

G010	- Metric Conversion System
G90	- feed in mm/min
G21	- Tool Change
G98	- tool 1 (Drill 10mm dia)
M06	- Spindle on (clockwise)
T01	- Speed (300 rpm)
M03	- Rapid traverse
S300	- Position
G00	- Coolant on
X20 Y20	- 5mm above point 1
M08	- Linear interpolation
Z5	- Drill 32mm below workpiece
G01	- feed 20.7
Z-32	- Position 2
F20.7	- Spindle off
X60 Y60	- Coolant off
M05	- Tool change
M06	- tool 2 (Drill 15mm dia)
T02	- Position 3
X40 Y40	- Drill 32mm below workpiece
Z-32	- workpiece
X0 Y0 Z100	- Home position
M30	- Reset the program