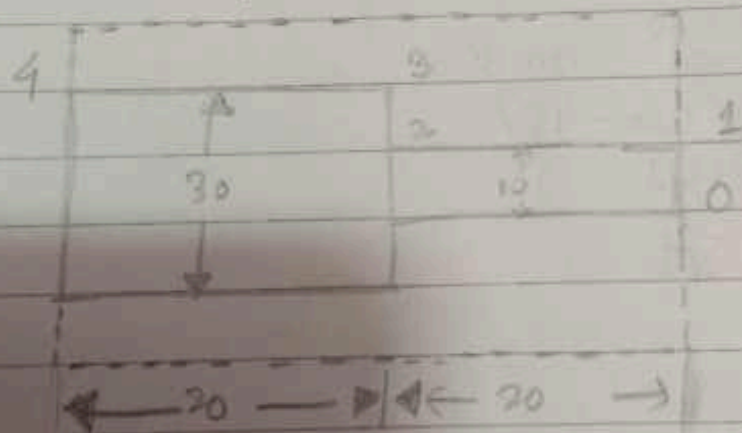Name : Sufiyan Ahmad Chaudhry
Roll NO : 06   PRN NO : 5064192018116 2511002
Semester : 07   Brach : Mechanical Engineering
Subject : Manufacturing process III

Assignment 3 : To develop a manual part program of a given component an CNC lathe using stock removal cycle.

Part Drawing :

Absolute Co-ordinate System (G90)

point (p)	X	Z
0	0	0
1	10	0
2	10	-20
3	80	-20
4	80	-40

part program
O1010

| N10 | G90 | G96 | G21 ; |
| N20 | M03 | M07 ; |

N30	T0101	S500	F0.8 ;
N40	G00	X0	20 ;
N50	G71	U1	R1 ;
N60	G71	P70 Q100 U0.5 W0.5 F0.5
N70	G01	X10 ;
N80	G01	2-20 ;
N90	G01	X-30 ;
N100	G01	2-40
N110	G70	P70 Q100 ;
N120	G00	X50 Z100 ;
N130	M05	M09 ;
N140	M03 ;

Explanatio:
O1010 — Program Name
G90 — Absolute prograame System
G96 — Consant Surface cutting Speed
G21 — Metric conversion System
M03 — Spinde on (clockwise (in room) direction)
M07 — Coolant on (Mist Type)
T0101 — Tool 01 and offset no.01

S500	—	Spinde Speed
F0.8	—	feed rate
G00	—	Rapid Traverse
X0 20	—	origin of part
G71	—	Stock Removal Cycle (ianned cycle)
U	—	Depth of Cut
R	—	Retract value
P	—	Starting block
Q	—	Ending block
U	—	Material left for finishing in x-axis
W	—	Material left for finishing i z-axis
F	—	overided feed rate btw P and Q.
G01	—	linear interpolation
G70	—	finishing cycle
M05	—	Spindle off
M09	—	coolant off
M030	—	Reset the program