Q) Suppose we have 2 CNC machines working simultaneously.The tool for machine 1 has

diameter 10mm while the tool for machine 2 has diameter 20mm.Below are the NC codes,

for some work , for the two machines:(ignore Z coordinates for now and assume the work is

done in XY plane)

Machine 1 Machine 2

N01 G90 N01 G90

N02 G71 N02 G71

N03 G92 X4.0 Y-4.0 N03 G92 X44.0 Y-11.0

N04 M03 S800 N04 M03 S800

N05 G03 X4.0 Y14.0 R9.0 F125.0 N05 G02 X44.0 Y21.0 R16.0 F125.0

N06 G00 Z50.0 M09 M05 N06 G00 Z50.0 M09 M05

N07 M30 N07 M30

Will these two machines be able to work simultaneously?

1. Yes , there is no error in the code and hence the machines work simultaneously without any problem
2. Probably , depends on what object is to be cut or milled
3. No .This is because although the codes have no errors , the 2 tools touch each other during the trajectory which will lead to collision.The machines would not work correctly.
4. No , there is an error in the codes 1 and 2 .

Ans) The correct option is (c)

