



UNIVERSITI KUALA LUMPUR
Malaysia France Institute

FINAL EXAMINATION
JANUARY 2010 SESSION

SUBJECT CODE	: FGD 22202
SUBJECT TITLE	: CNC TECHNOLOGY
LEVEL	: DIPLOMA
TIME / DURATION	: 4.00pm – 6.00pm (2 HOURS)
DATE	: 05 MAY 2010

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper CAREFULLY.
 2. This question paper is printed on both sides of the paper.
 3. Please write your answers on the answer booklet provided.
 4. Answer should be written in blue or black ink except for sketching, graphic and illustration.
 5. This questions paper consists of TWO (2) sections. Section A and B. Answer ALL questions in section A. For sections B, answer ONE (1) question only.
 6. Answer all questions in English.
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THERE ARE 6 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 60 marks)

INSTRUCTION: Answer ALL question.

Please use the answer booklet provided.

Question 1

Explain the function and give the correct Code.

a) Traverse the tool along a linear path to the given target point with the feed rate input as supplementary function.

(2 marks)

b) Causes position to be as in imperial units

(2 marks)

c) Causes a fast traverse to the specified position and then to the machine datum

(2 marks)

d) This command coupled with the F word is used to specify feed rate per minute. This can be in either mm/min or inch/min.

(2 marks)

e) A rapid traverse instruction traverse tool to the target point at maximum traverse rate.

(2 marks)

Question 2

Explain the function and give the correct Code.

a) Stops the spindle. Turns the coolant off. Terminates and resets the CNC program.

(2 marks)

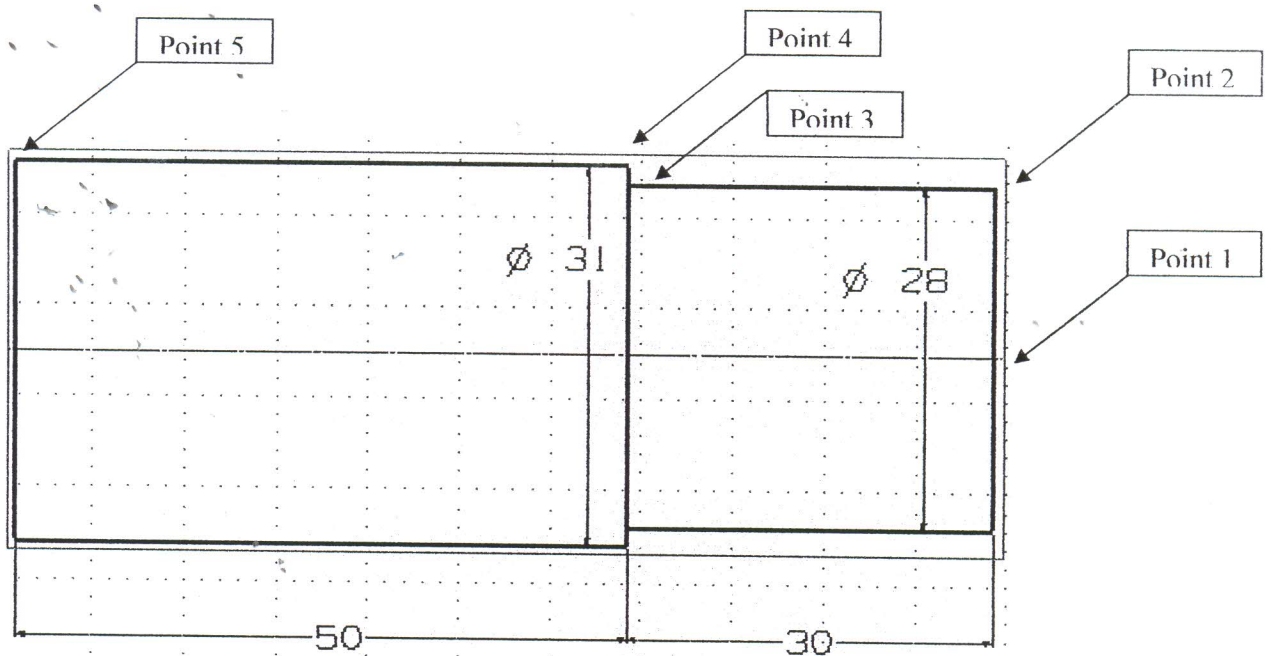
b) Instruction stop spindle rotation. It is good practice to issue an this code before a tool change, and at the end of a program.

(2 marks)

- c) Instruction starts forward spindle motion with specify speed. (2 marks)
- d) Turns the coolant off (2 marks)
- e) Instruction starts reverse spindle motion with a speed command. (2 marks)

Question 3

- a) Explain what the Incremental positioning System is. (2 marks)
- b) Make a coordinate using Absolute System by using *Figure 1*. All dimension are in mm. (8 marks)

*Figure 1*

Question 4

- a) Briefly explain what is the Work Coordinate. (4 marks)
- b) What is the different between Machine coordinate and Work coordinate? (4 marks)
- c) What is the function of ' EDIT ' Mode on the control panel? (4 marks)
- d) Explain briefly how to make a setting tool for CNC Lathe machine (eg. Tool no. 4).
Tool for turning. (8 marks)

Question 5

Explain about safety at CNC Lab.

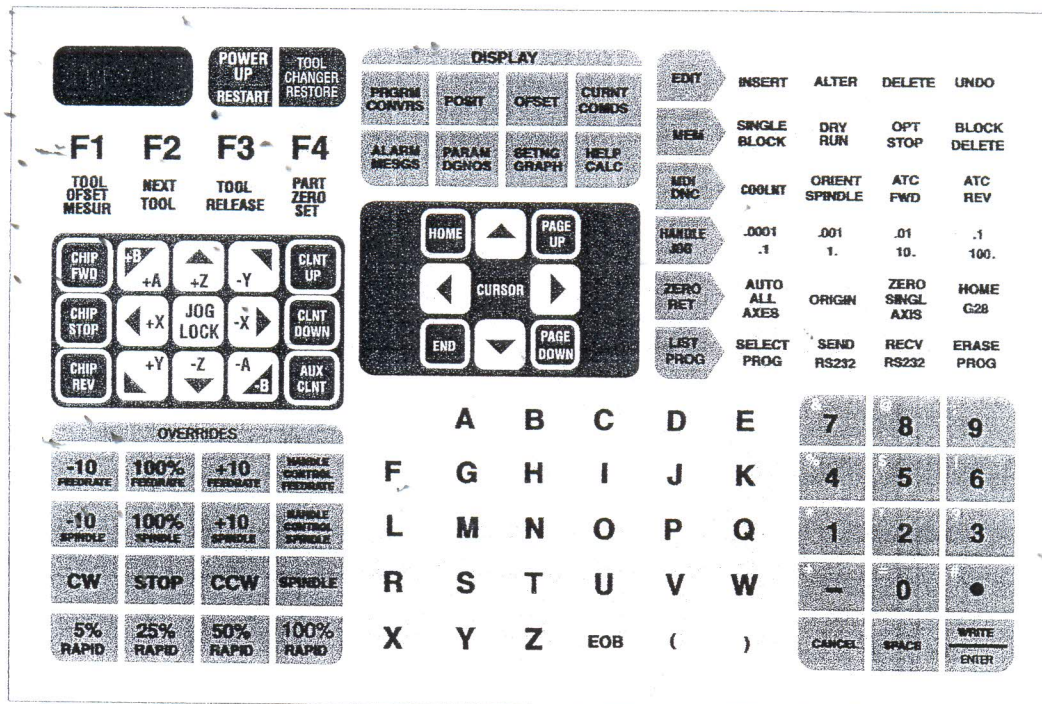
- i) Personal safety
- ii) Lab. Safety
- iii) Machine Safety operating procedure.

(10 marks)

HAAS AUTOMATION

VF/HS - MILL SERIES C.N.C. CONTROL PANEL

Description of display modes and operation
modes with key pad operation and functions



SECTION B (Total: 40 marks)

INSTRUCTION: Answer only ONE question.

Please use the answer booklet provided.

Question 6**CNC LATHE MACHINE**

Write down the full NC program of the part in figure 2.

All dimension are in mm.

(40 marks)

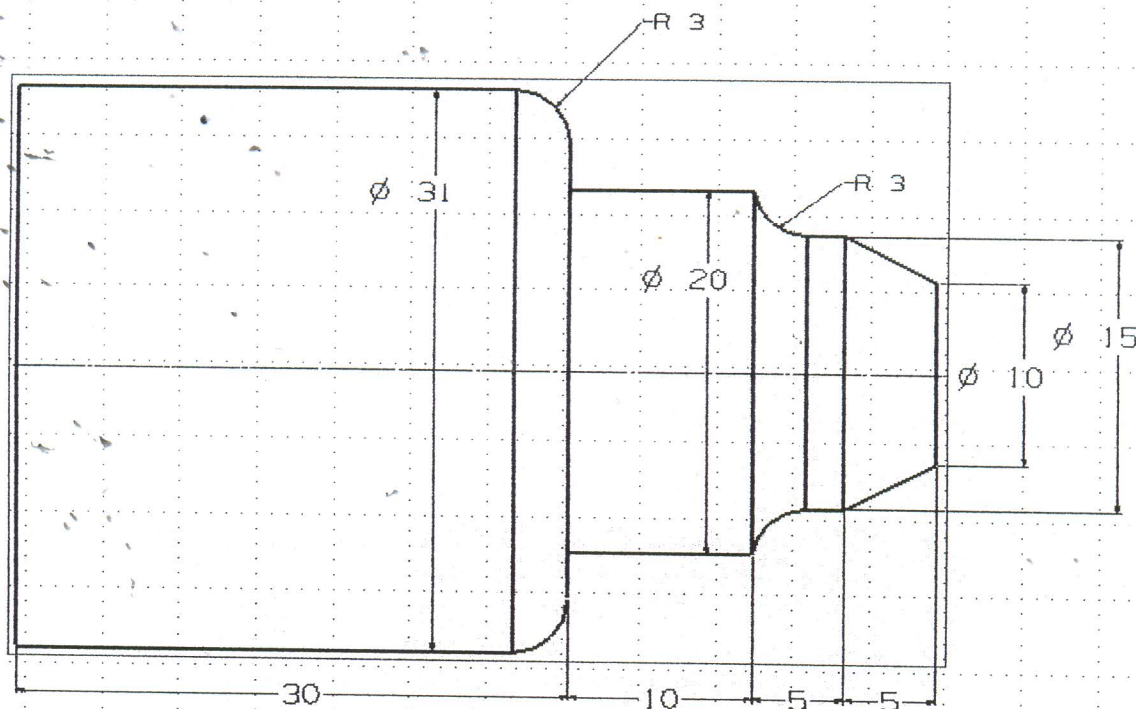


Figure 2

Question 7

CNC MILLING MACHINE

Write down the full NC program of the part in figure 3.

All dimension

(40 marks)

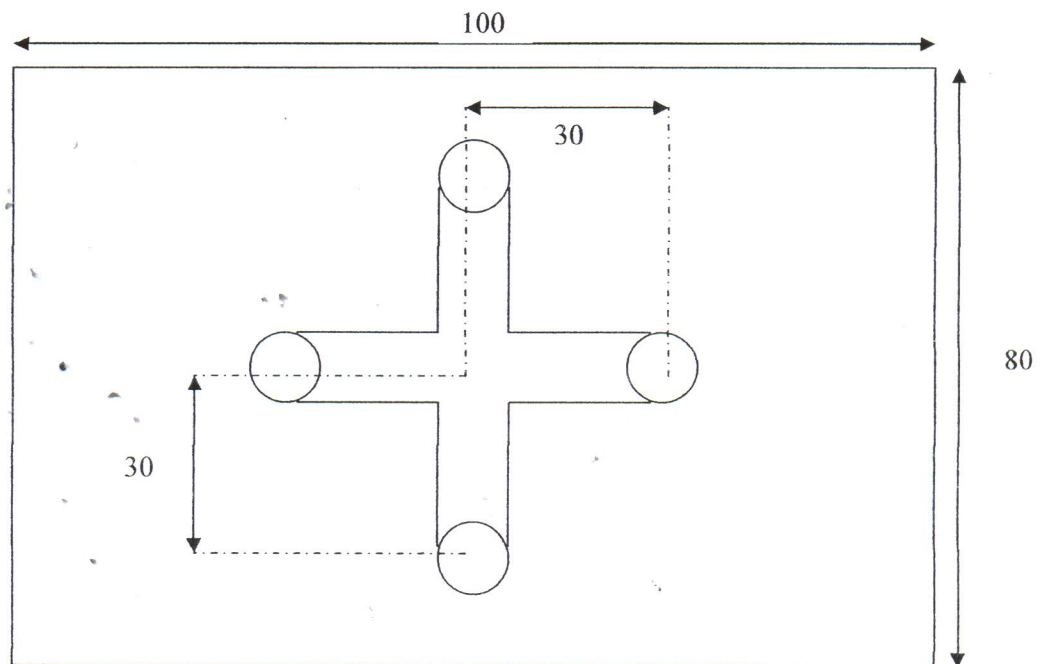


Figure 3

- i) Workpiece size 100mm x 80mm x 10mm.
- ii) 4 x 10mm diameter hole, depth 10mm.
- iii) Used endmill 10mm.
- iv) Depth of groove 5mm.

END OF QUESTION