UNIVERSITY COLLEGE
TATI

UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: DTM 1082
COURSE	: CNC PROGRAMMING
SEMESTER/SESSION	: 1-2024/2025
DURATION	: 2.0 HOURS

Instructions:

1. This booklet contains **5** questions. Answer all questions

2. All answers should be written in answer booklet.

3. Write legibly and draw sketches wherever required.

4. If in doubt, rise up your hand and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 4 PRINTED PAGES INCLUDING COVER PAGE

Answer all five (5) questions.

Question 1

    a) **Define** Computer Numerical Control (CNC).   (2 marks)

    b) **Give** two (2) advantages and two (2) disadvantages of CNC machine.

                      (4 marks)

    c) **Describe** three (3) main components of CNC machine.   (6 marks)

Question 2

    a) **Describe** two (2) methods to determine coordinates in CNC programming.

                      (2 marks)

    b) **Explain** Computer Numerical Control (CNC) programming standard format that generally used by most of the machine manufacturer.   (14 marks)

Question 3

Process planning of CNC machining is critical to ensure cost, time and quality parameters of manufacturing operations. **Schedule** the steps of processes for the CNC machining program.   (16 marks)

Question 4

With the given drawing (Figure 1):

    a) **Compute** the feed in meter/min if carbide tool with diameter 10mm, four-tooth, recommended feed per tooth is 0.2mm and cutting speed is 75m/min.

                      (10 marks)

    b) **Prepare** CNC program by using absolute OR incremental format.

                      (22 marks)

Question 5

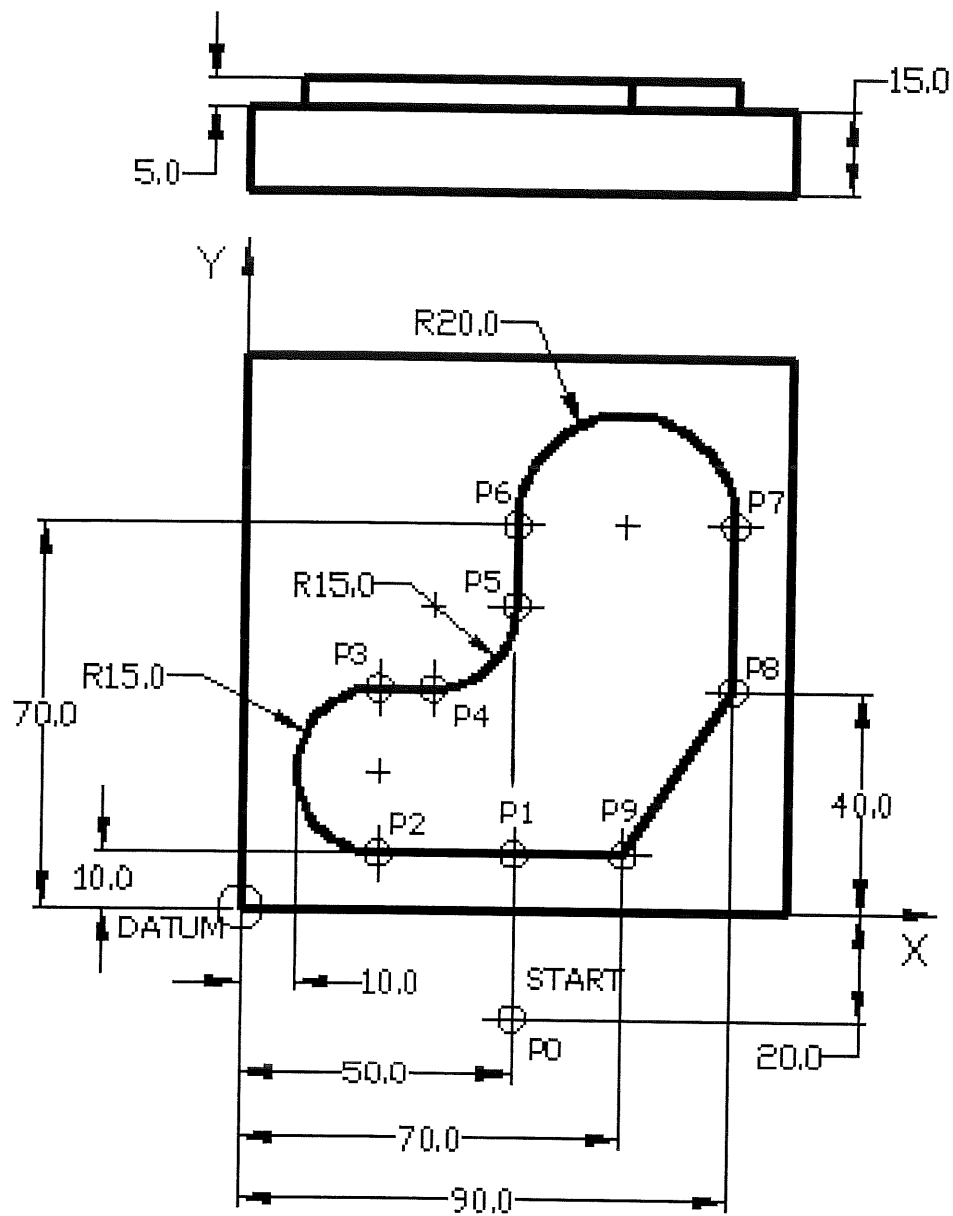With the given drawing (Figure 2), **prepare** CNC program by using absolute OR incremental format.   (24 marks)
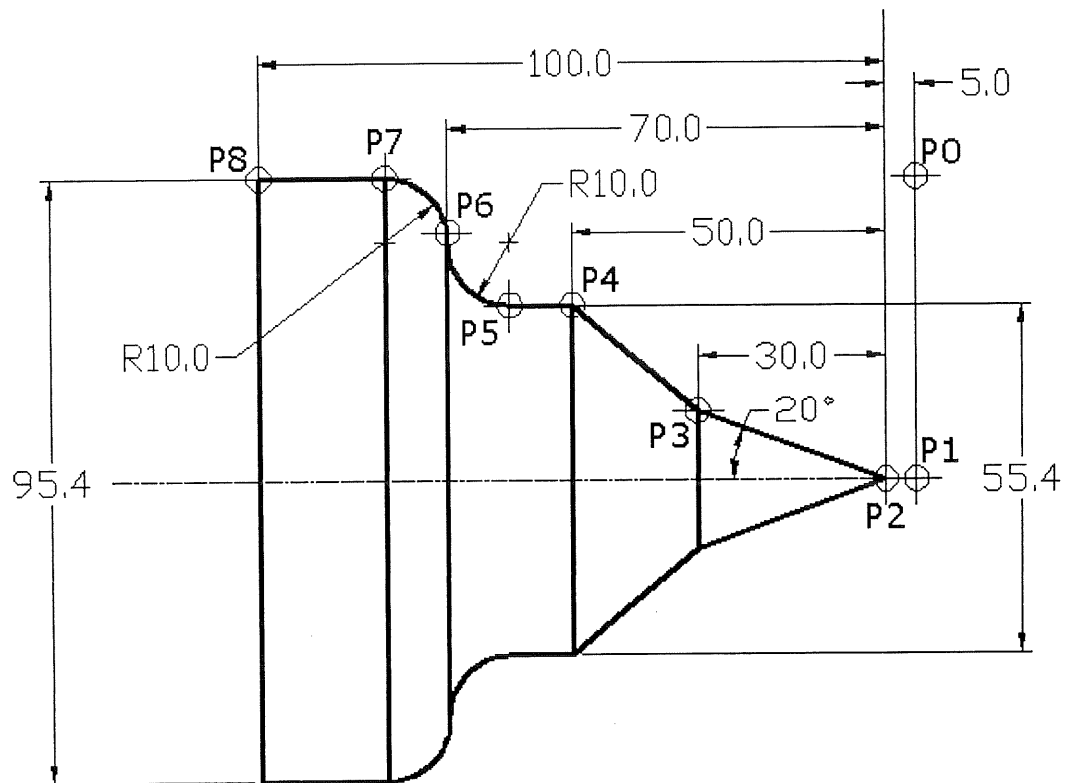
Figure 1

Figure 2

--End of questions ------------------------------------