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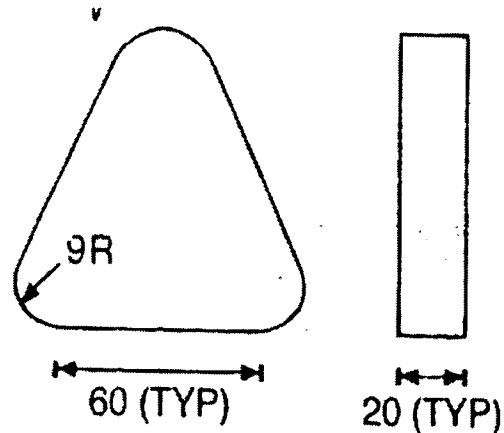
BACHELOR OF VOCATION
Tool and Die Manufacturing
Subject: Programming in CNC Machines
Subject Code: CBME-102
Semester: Second
October 2020
Theory (External): 35 Marks
Time: 03 Hours

INSTRUCTIONS TO THE STUDENTS

1. Read the questions carefully and write the answers in the answer sheets.
2. Wherever necessary, the diagram drawn should be neat and properly labelled.
3. This questions paper comprises of 8 questions out of which student need to attempt any 4 questions.
4. All questions carry equal marks.
5. The time allotted will be 3 hours for examinations including time of downloading of question paper to emailing of answer books to the concerned Dean/IC.

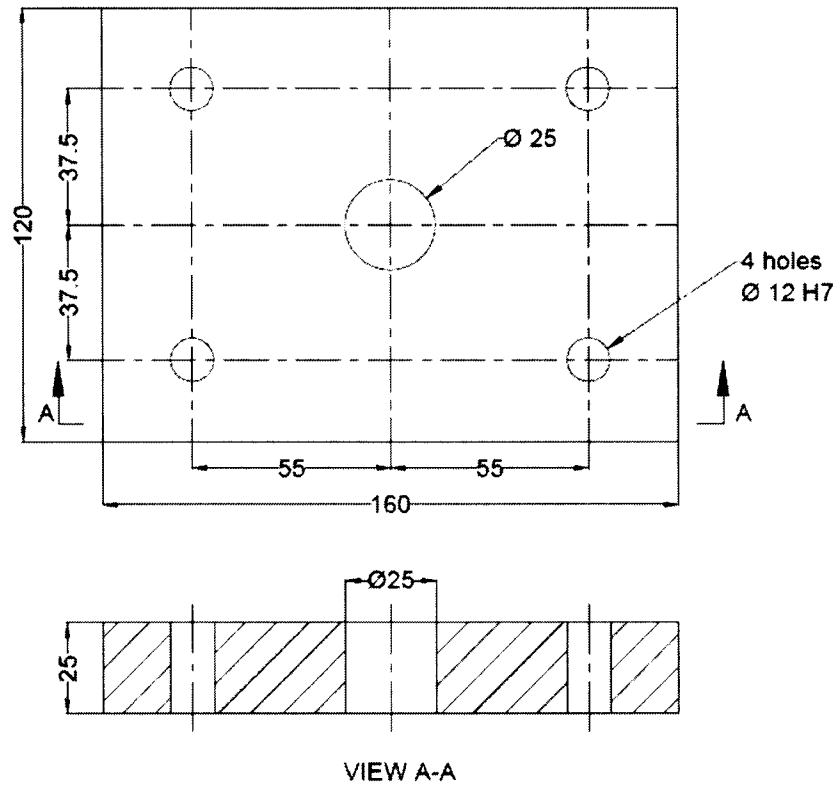
ESSAY TYPE QUESTIONS

1. Discuss the following G and M codes:
 - a) G00
 - b) G01
 - c) G03
 - d) M06
 - e) M03
2. Differentiate between manual part programming and computer aided part programming.
3. Prepare a part program for machining the steel component as shown in figure given below. Raw material is a triangular plate of 80mm each side and 20mm thickness.



4. Explain the following:
 - a) Peck Drill Cycle
 - b) Bore Cycle
5. What do you understand from sub-routines in part programming? How are they labelled?
6. What is APT? Write the main features of APT.

7. How are lines defined in APT?
8. Prepare a part program for machining holes in an aluminium component as shown in figure given below:



*****END OF PAPER*****