



## University of Ruhuna- Faculty of Technology

Bachelor of Engineering Technology Honours

Level II (Semester 2) Examination, November

2023

Academic year 2021/2022

Course Unit: ENT2262 Technical Drawing and Computer-Aided Drafting

Duration: 3 hours

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- Answer all Five (05) questions. Each question carries 10 marks.
  - Use provided A2 papers to answer your questions and use both sides to answer questions.
  - This is a closed-book examination.
  - Your answer sheet should contain a border on both sides and the description cage on only one side drawn according to the standards used during the practical sessions.
  - Answer **all** questions.
  - Assume reasonable values for any data not in or with the examination paper. Clearly state such assumptions made in the script.
  - If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it in the script.
  - **ADDITIONAL MATERIALS:**
    - Attachment for Q1 B
    - Attachment for Q4
    - Attachment for Q5



Q1.

a) Construct a regular polygon having 9 sides with a 50 mm length of a side using the general method.

(4.0 Marks)

b) Construct the attached drawing Q1.B using appropriate geometrical construction techniques.

(6.0 Marks)

Q2.

a) Draw an Involute of a circle with a radius of 30 mm. String length equals the circle's circumference.

(5.0 Marks)

b) Draw the locus of a point on the periphery of a circle, which rolls on the outside of a directing circle. Take the diameter of the rolling circle as 50 mm and the directing circle's radius, as 75 mm.

(5.0 Marks)

Q3.

Construct the following conic sections.

a) Draw an ellipse in a rectangle with a base of 150 mm and a height of 90 mm by the rectangular method.

(3.0 Marks)

b) Construct the following conic curves in the same drawing:

I. A parabola having a focal length (F point) of 80 mm from a fixed directrix  $AB$ .

II. A hyperbola having a focal length (F point) of 80 mm from a fixed directrix  $AB$  and an eccentricity of  $3/2$ .

(7.0 Marks)

Q4.

Draw the given Front View of the attached Q4 drawing to 1:1 scale. Project the sectional end view through the plane through A-A in third angle projection. All the dimensions of the given drawing are in mm.

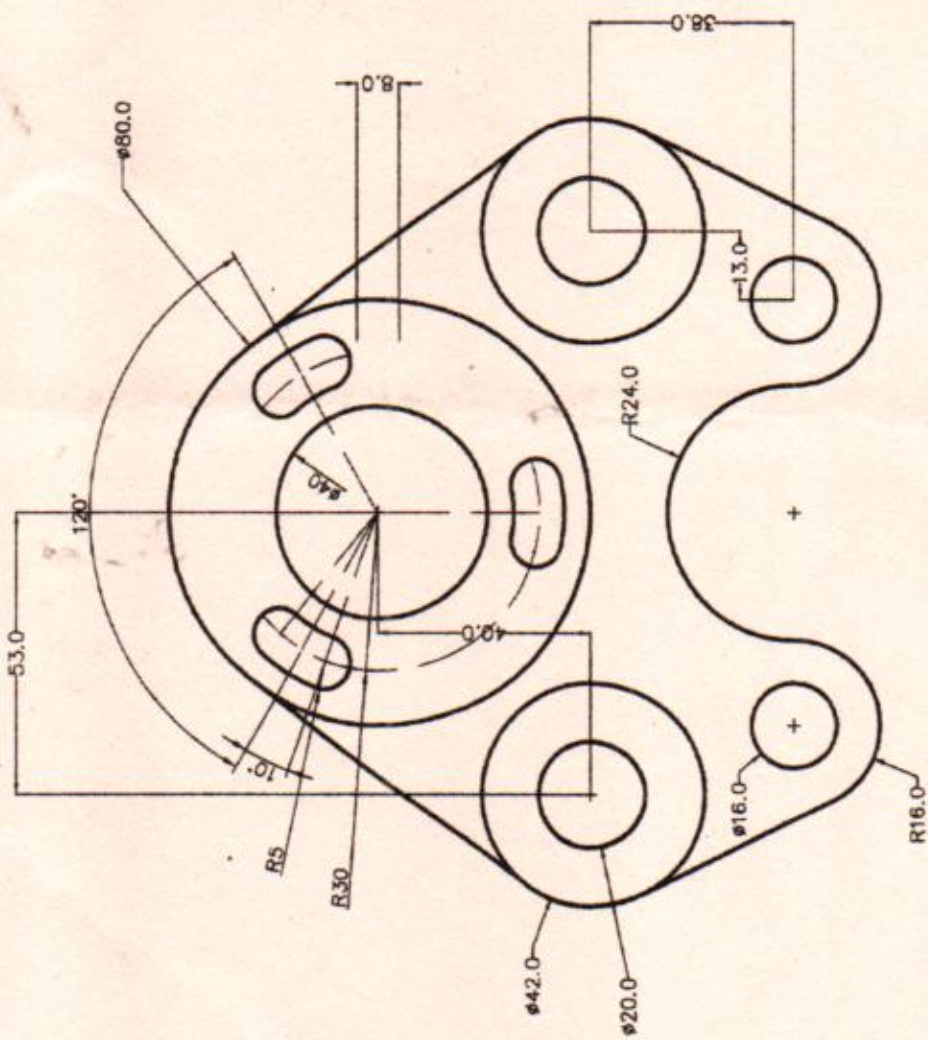
(10.0 Marks)

Q5.

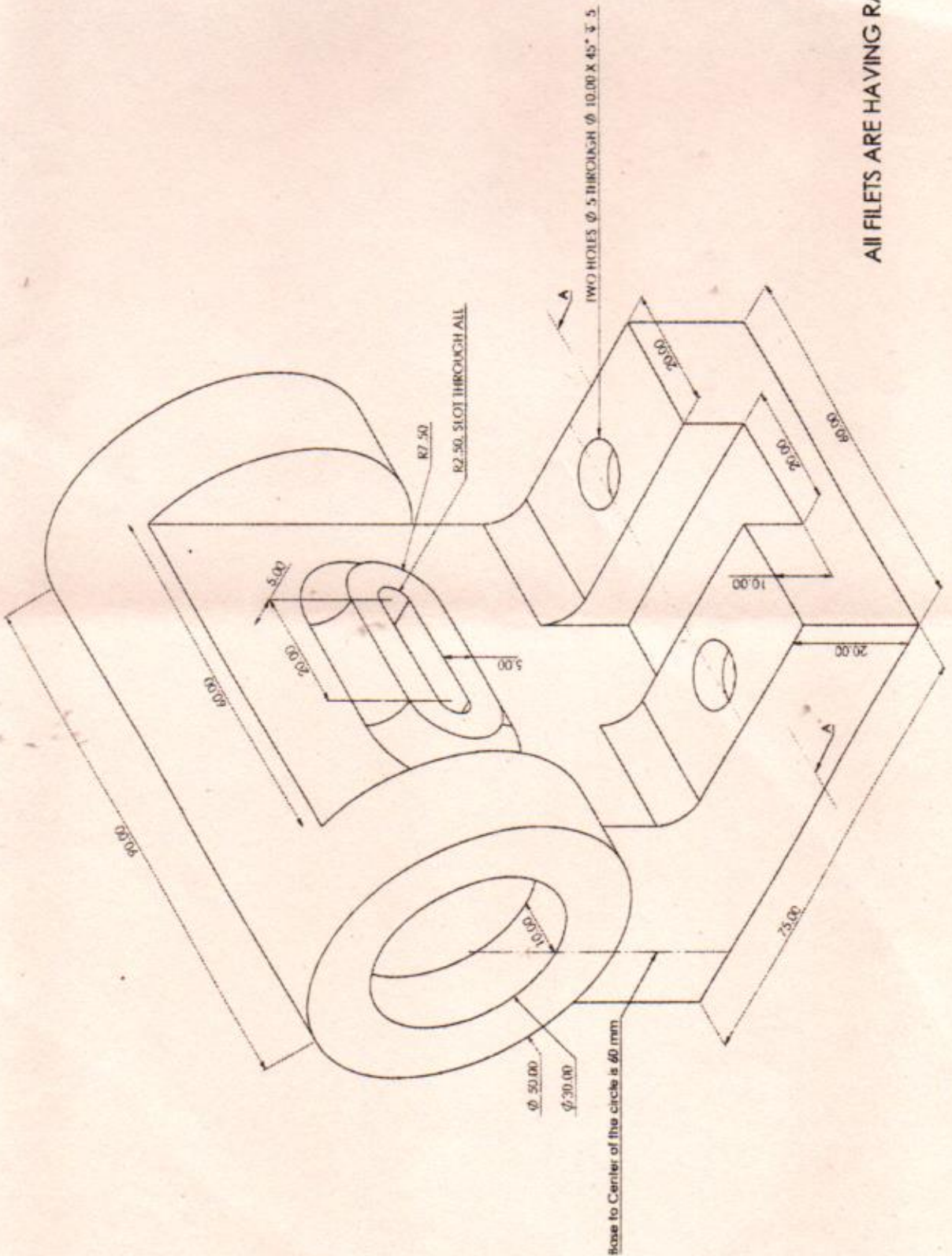
Construct the isometric view of the object denoted by the Q5 Multiview drawing attachment. All dimensions are in mm.

(10.0 Marks)





Drawing Q1.b



ALL FILETS ARE HAVING RADIUS 5 mm

ISOMETRIC DRAWING FOR Q4



MULTI VIEW DRAWING RELATED TO Q5

