NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF INDISTRIAL AND MANUFACTURING ENGINEERING

ENGINEERING DRAWING I

TIE 1101

Supplementary Examination Paper

August 2015

This examination paper consists of 5 pages

Time Allowed: 3 hours and 15 minutes

Total Marks: 100

Special Requirements: A3 size Drawing Board, A3 size Drawing sheets, Tee Square.

Examiner's Name: Mrs Eriyeti Murena

INSTRUCTIONS

1. Answer all question in Section A any two in Section B
2. Each question in Section B carries 20 marks

MARK ALLOCATION

QUESTION	MARKS
1.	**35**
2.	**25**
3.	**20**
4.	**20**
5.	**20**
TOTAL	**100**

Section A (Answer all questions)

Question 1

1. Produce a simple Title Block in the top right-hand corner of your A3 Drawing Paper and print your Student Number, Department, Subject Name and Number. Print your Student Number Only on the rest of your answer sheets. (5 marks)
2. Draw full size in third angle orthographic projection the following views of the Machine Part shown in Figure Q1:
   a) Front View elevation in direction of arrow X
   b) Sectional End seen along cutting plane P-P
   c) A Plan projected from view (a) [30]

Question 2

Draw an Isometric Projection view of the Block shown in Figure Q2. Position the drawing so that corner Q becomes the lowest point. [5]

Section B (Answer any two questions)

Question 3

A hexagonal prism shown in Figure Q3, edge of base 20 mm and axis 50 mm long, rests with its base on H.P such that one of its rectangular faces is parallel to V.P. It is cut by a plane perpendicular to V.P, inclined at 45^{o} to H.P and passing through the right corner of the top face of the prism.

Draw the sectional top view and develop the lateral surface of the truncated prism.

[20]

Question 4

a) Construct a regular hexagon within an 80 mm diameter circle. The corners of the hexagon must all lie on the circumference of the circle. [10]
b) Construct a square, side 100mm. Within the square, construct a regular octagon. Four alternate sides of the octagon must lie on the sides of the square. [10]

Question 5

Figure Q5 shows the outline of a metal blank. Draw the blank, full size, showing clearly the constructions for finding exact positions of the tangents joining the arcs. [20]

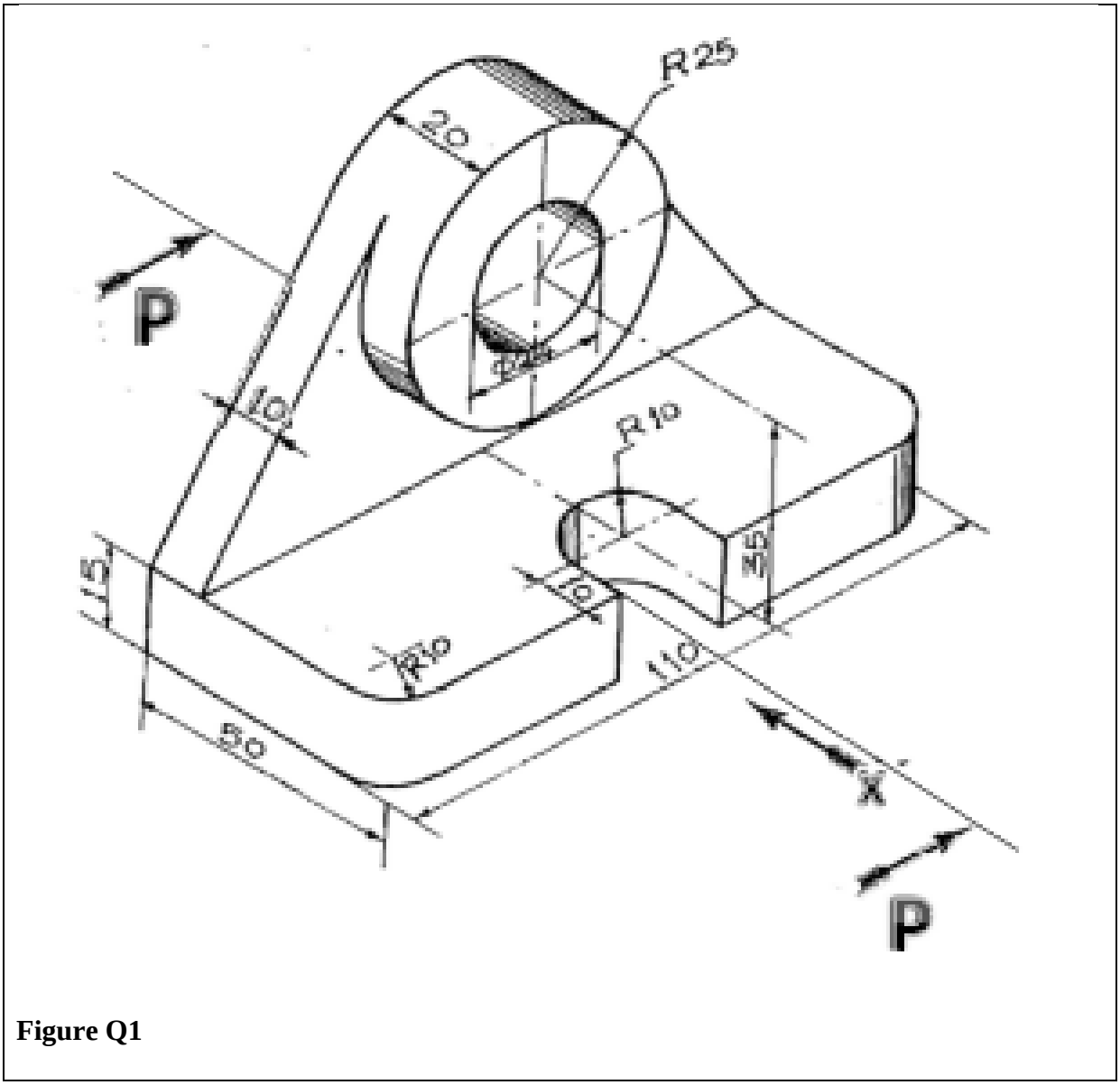

Figure Q1

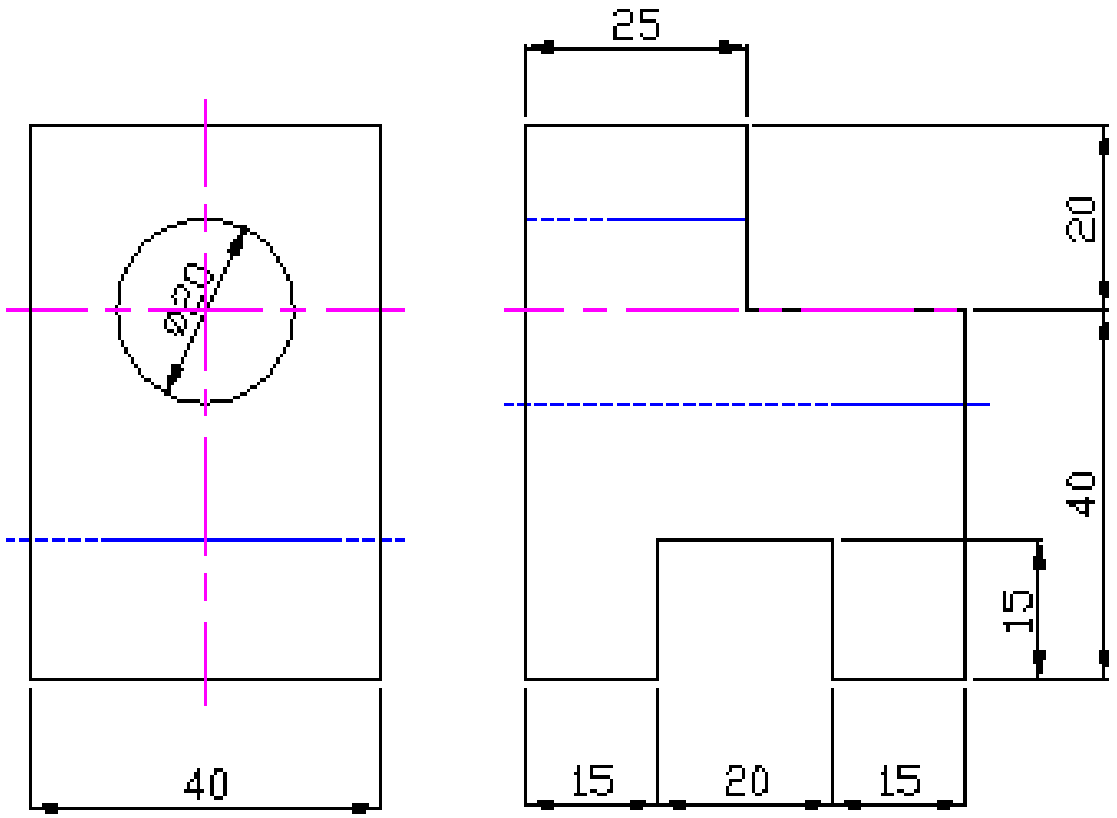

Figure Q2

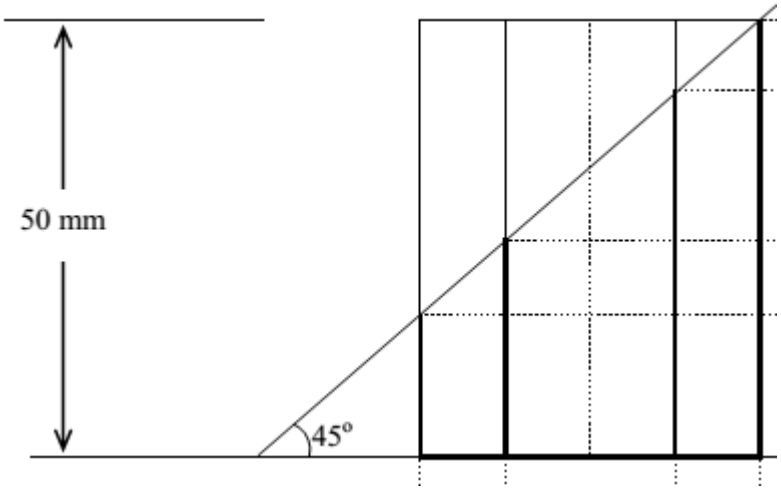

Figure Q3

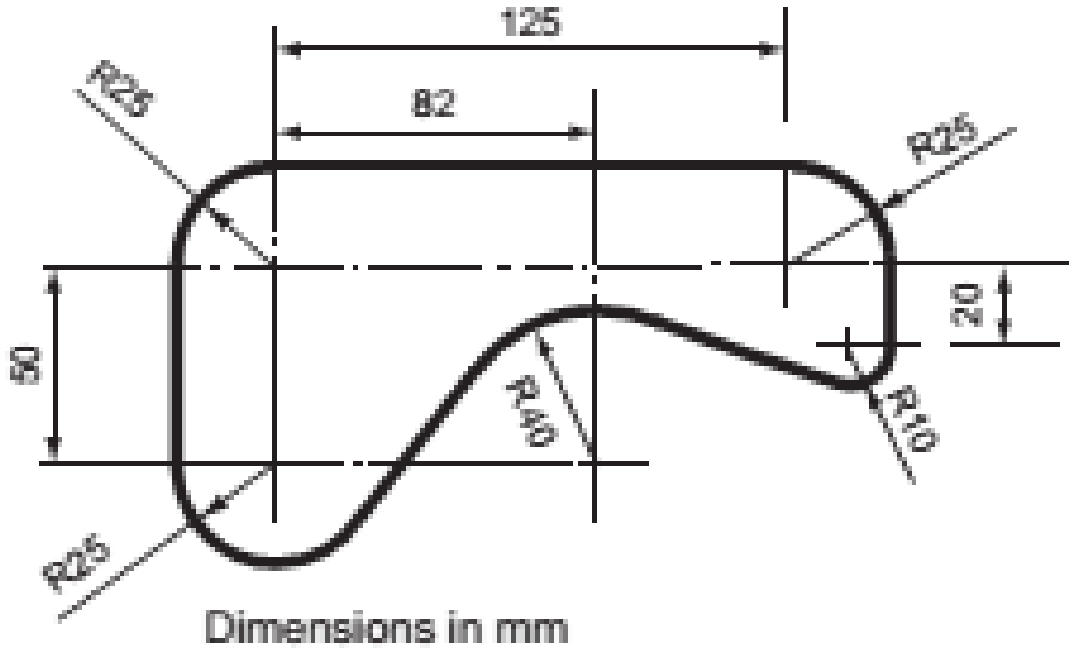

Figure Q5