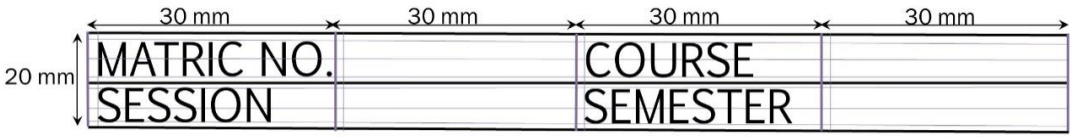
UNIVERSITY OF LAGOS
FACULTY OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Full Title(s) of Examination: B.Sc. (Mechanical Engineering)
Session: ~~second semester, 2021/2022 academic session~~
Code & Title of Course: Engineering Drawing (MEG 211) Time allowed: 2 Hours

Instructions: There are two sections in this paper. You are required to attempt two questions from Section A and all questions in Section B. You should answer four questions in all. Neatness and accuracy are of utmost importance. Drawings should, preferably, be drawn to full scale; otherwise, reasonable scale selected must be clearly stated. On drawing sheets, the border lines and title block should be drawn appropriately. Only your matriculation number must be written in ink (other details in pencil) and in good lettering. The title block format is shown below. The drawing number is the questions you attempted. Reverse pages of drawing sheets may be used but the border line must be drawn on such pages with matriculation number written in ink at the bottom right corner of the sheet within the border line. The blank page of the drawing sheet is the major drawing area. Unless otherwise stated, all dimensions are in mm.



Title block format

SECTION A

QUESTION 1:

a) Draw a regular hexagon of diameter 50 mm A/F
b) Draw a regular octagon of diameter 50 mm A/C
c) Draw a parabola if the distance of the focus from the directrix is 60 mm

QUESTION 2:

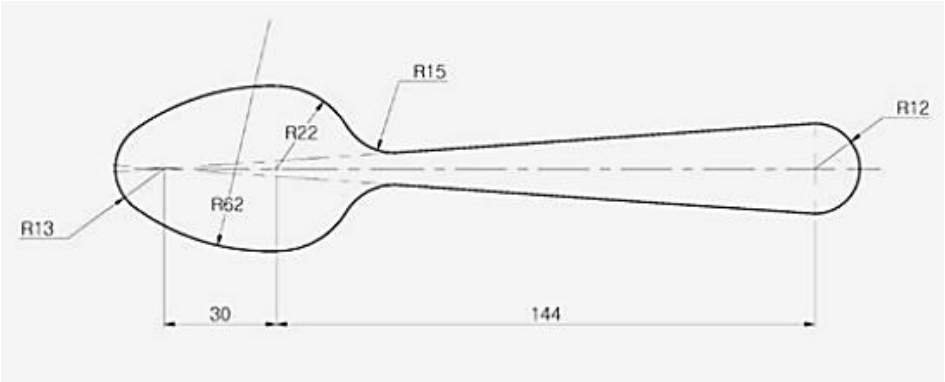
(a) Draw a triangle ABC of sides 50 X 40 X 30 mm. Inscribe and circumscribe circles on the triangle.
(b) Draw a line of 50 mm and divide it in the ratio 3: 5.
a) Draw a hyperbola whose eccentricity is $^3/_2$ and the focus is 50 mm away from the vertex.

QUESTION 3:

b) Draw an ellipse whose axis are 80 X 50 mm.
c) Draw a regular pentagon of side 50 mm.

QUESTION 4:

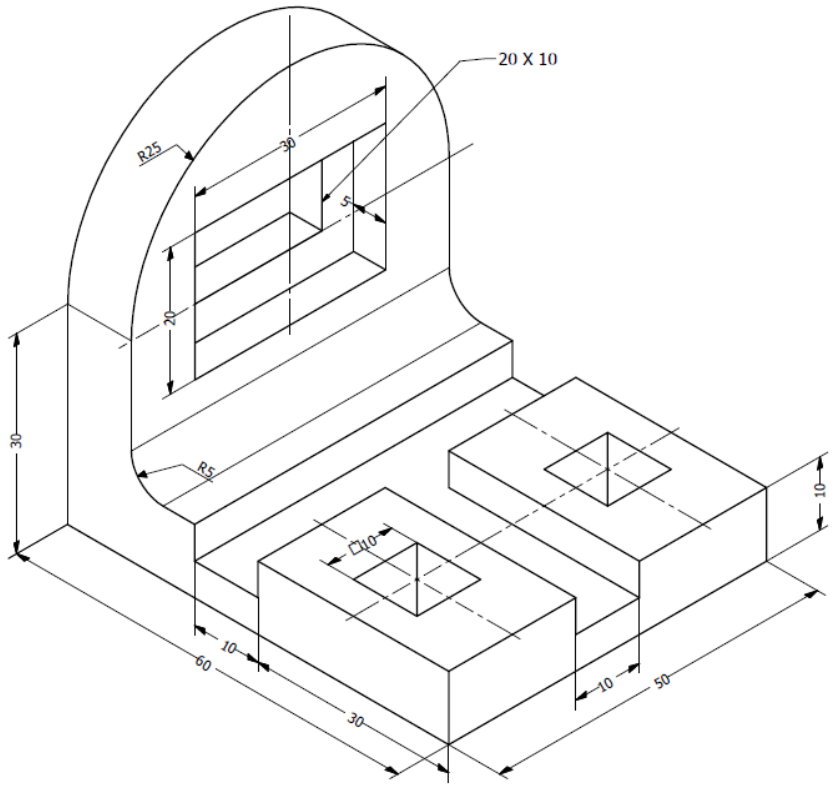
Reproduce the figure below



SECTION B

OUESTION 5:

The figure shown is the isometric view of a jig. Produce the fully dimensioned orthographic projection of the figure in first angle projection.



OUESTION 6

The Figure shows a block in drawn orthographic projection. Produce the isometric projection of the block shown. You are required to show the overall dimensions on your drawing.