

P720/P710/1

BUILDING AND GEOMETRICAL DRAWING,

PAPER 1

JULY/AUG. 2019

3 HOURS



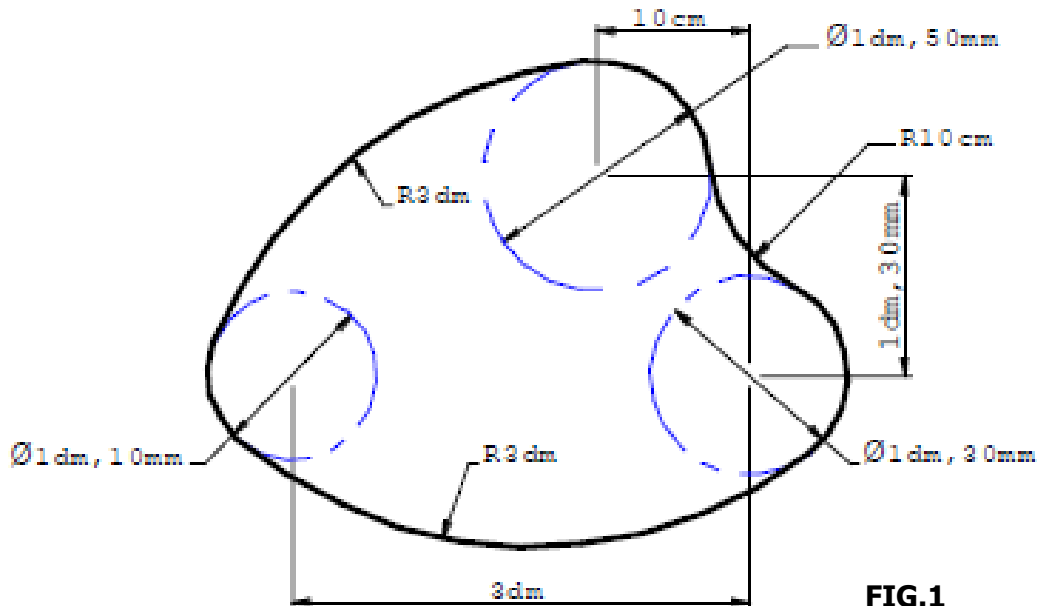
MUKONO EXAMINATION COUNCIL
UGANDA ADVANCE CERTIFICATE OF EDUCATION,
TECHNICAL DRAWING
PAPER 1
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INSTRUCTIONS TO CANDIDATES

- *The question paper consists of **two** sections **A** and **B** and a total of **eight** questions,*
- *Answer any **five** questions. Not more than three questions may be answered from any one section.*
- *All dimensions are in millimeters unless otherwise stated.*
- *The given figures are not drawn to scale.*
- *All questions carry equal marks.*

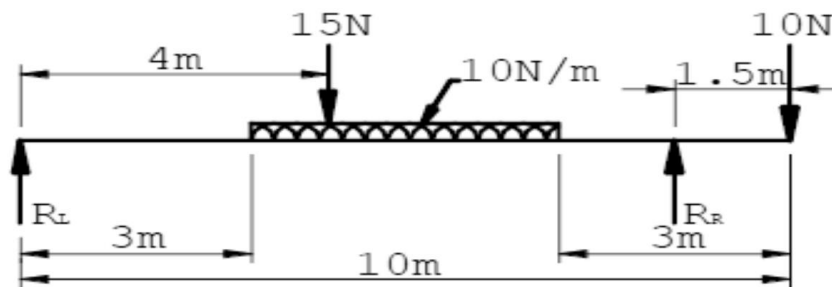
SECTION A PLANE GEOMETRY

- 1.a) Construct a diagonal scale of 1.2:4 to read up to 5dm in cm and mm up to 10mm. **(10marks)**
- b) Construct the given template using the scale in (a) and draw a similar figure with its area in the ratio of 3:2 **(10marks)**



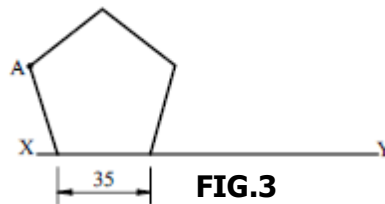
2. The figure shows a beam loaded with concentrated loads and a uniformly distributed load. Determine;

- Support reactions. **(08marks)**
- Shear force and bending moment diagrams. **(04marks)**
- Shear force and bending moment at 6m from RL. **(08marks)**

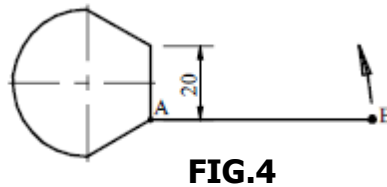


3. Draw two complete turns of a double start right hand square thread of 100mm outside diameter and 80mm pitch. **(20marks)**

4. a. Construct the path taken by point A on the regular pentagon when it rolls without slipping for one revolution along surface XY. **(10marks)**



- b. Construct the path taken by end B of the string AB when wound around the given surface while keeping the string taut. The length of the string is equal to the total length around the semi-circle and semi-hexagon. **(10marks)**



SECTION B SOLID GEOMETRY

5. The figure shows a shaped round bar resting in a 'V' groove of a shaped block. Construct the isometric projection of the parts making corner 'A' the lowest point. **(20marks)**

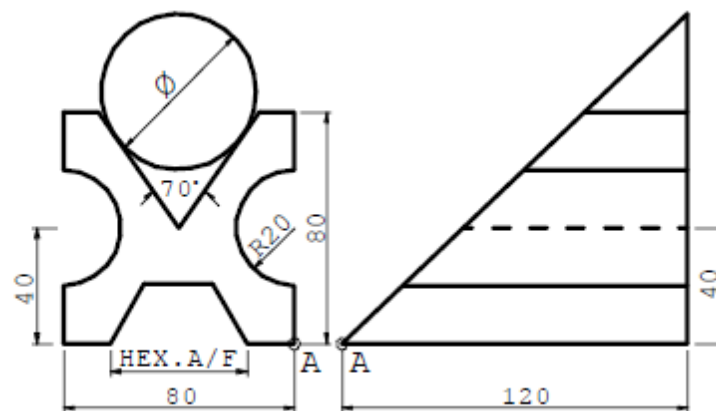
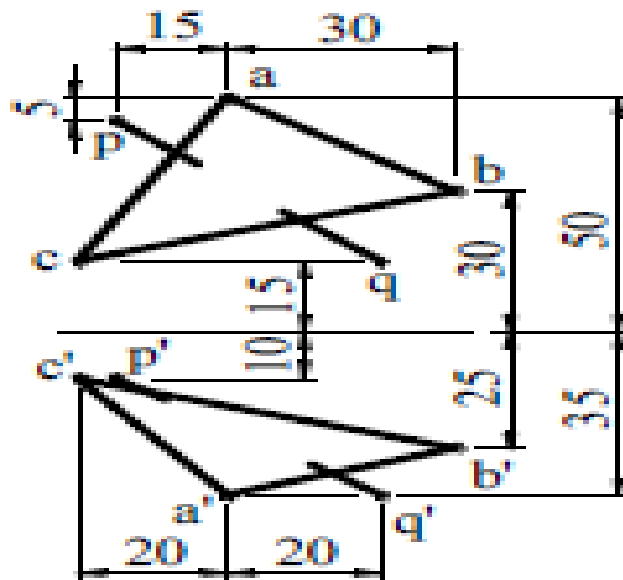


FIG.5

6. The figure shows views of a triangular lamina **abc** pierced by line **pq**.
- Complete the given views and determine the piercing point. **(16marks)**
 - Determine the true angle between the line and the lamina. **(04marks)**



7. An incomplete elevation of an ornamental item to be made out of 8 similar panels is shown. Complete the elevation and construct the development of one panel. (20marks)

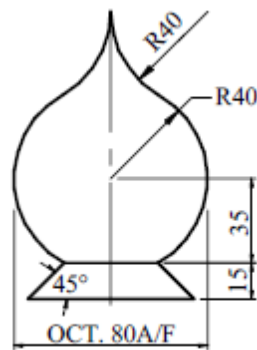
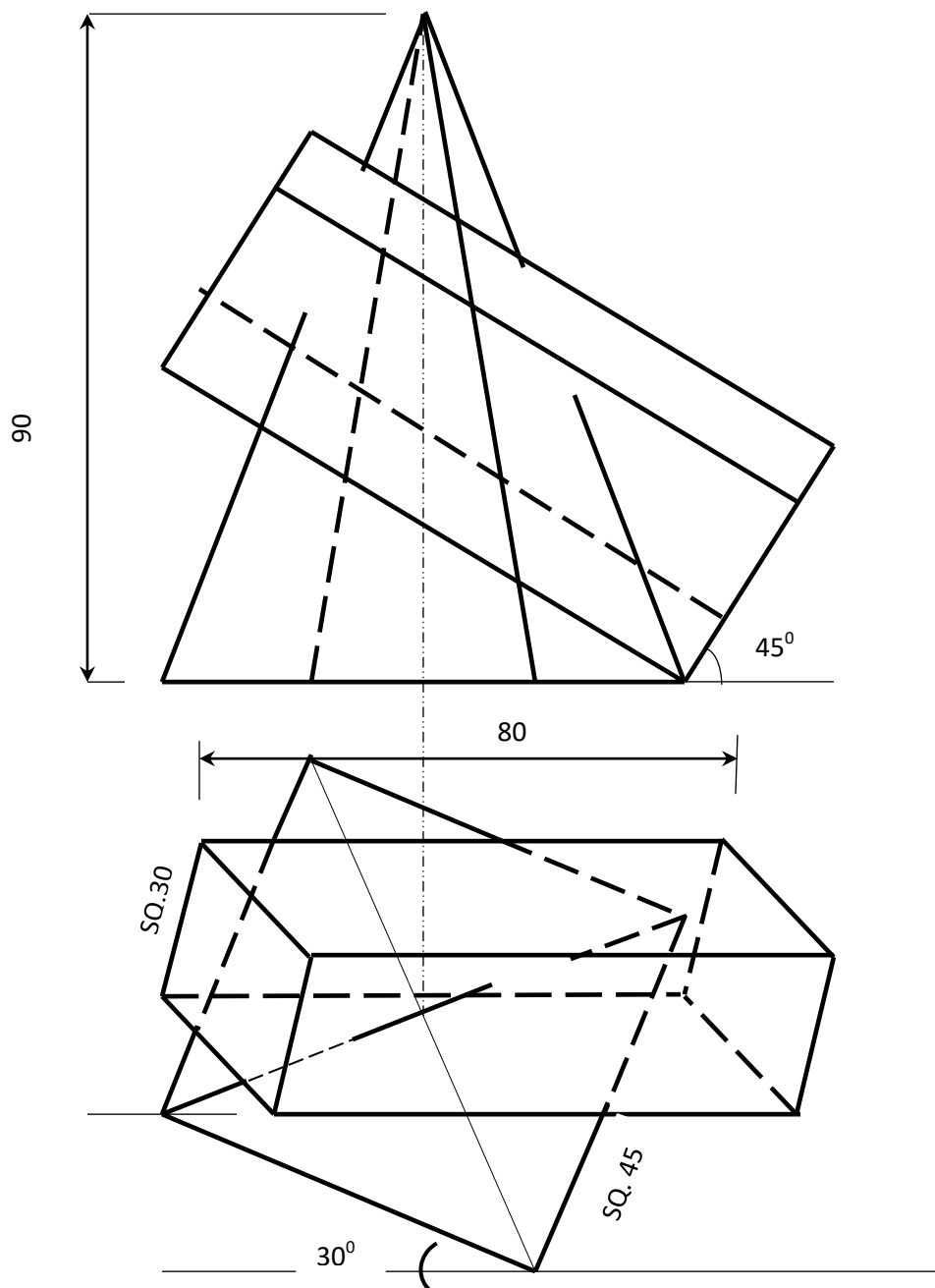


FIG.7

8. Shown in the figure below is an orthographic drawing of the intersection of between square prisms and square based pyramid.

Draw the given views showing clearly the lines of interpenetration. **(20marks)**



THE END