UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

SECOND SEMESTER EXAMINATIONS, SEPT. /OCT. 2022

COURSE NO: All BSc 156

COURSE NAME: ENGINEERING DRAWING

CLASS: All BSc I

TIME: 4 HRS

Name: _____ Index Number: _____

Instruction: Answer Q1 (compulsory) and any in addition, either Q2 or Q3

Q1. Figure 1 shows the isometric drawing of a v-block assembly. The assembly consists of V-Block (1), Clamping Screw (2) and Yoke (3). The assembled unit is symmetrical about the vertical and the profile planes. Draw full size, in first angle projection the following views of the assembly:

(a) a sectional front view along cutting plane X-X

(b) a plan

(c) an end view

You are required to insert a title block with the relevant information, a part list with the corresponding reference balloons and suggest a suitable material for each of the parts.

Q2. A vertical cylinder of 60 mm diameter and height 80 mm is resting on the HP on its base. It is penetrated by another horizontal cylinder of 40 mm diameter and 70 mm long. The axis of the horizontal cylinder is parallel to V.P and 10 mm at the back of the axis of the vertical cylinder. Draw the projections of the cylinder along with the curves of intersection.

Q3. A square prism with side of base 50 mm and height of 75 mm lies with its base on the H.P. such that all of its vertical faces are equally inclined to the V.P. It is truncated by a projecting plane which makes an angle of 45° with the horizontal plane and passing through a point 55 mm above the base on the axis. Construct the three (3) projections, the true shape of the section and develop the surface of the truncated square prism completely.

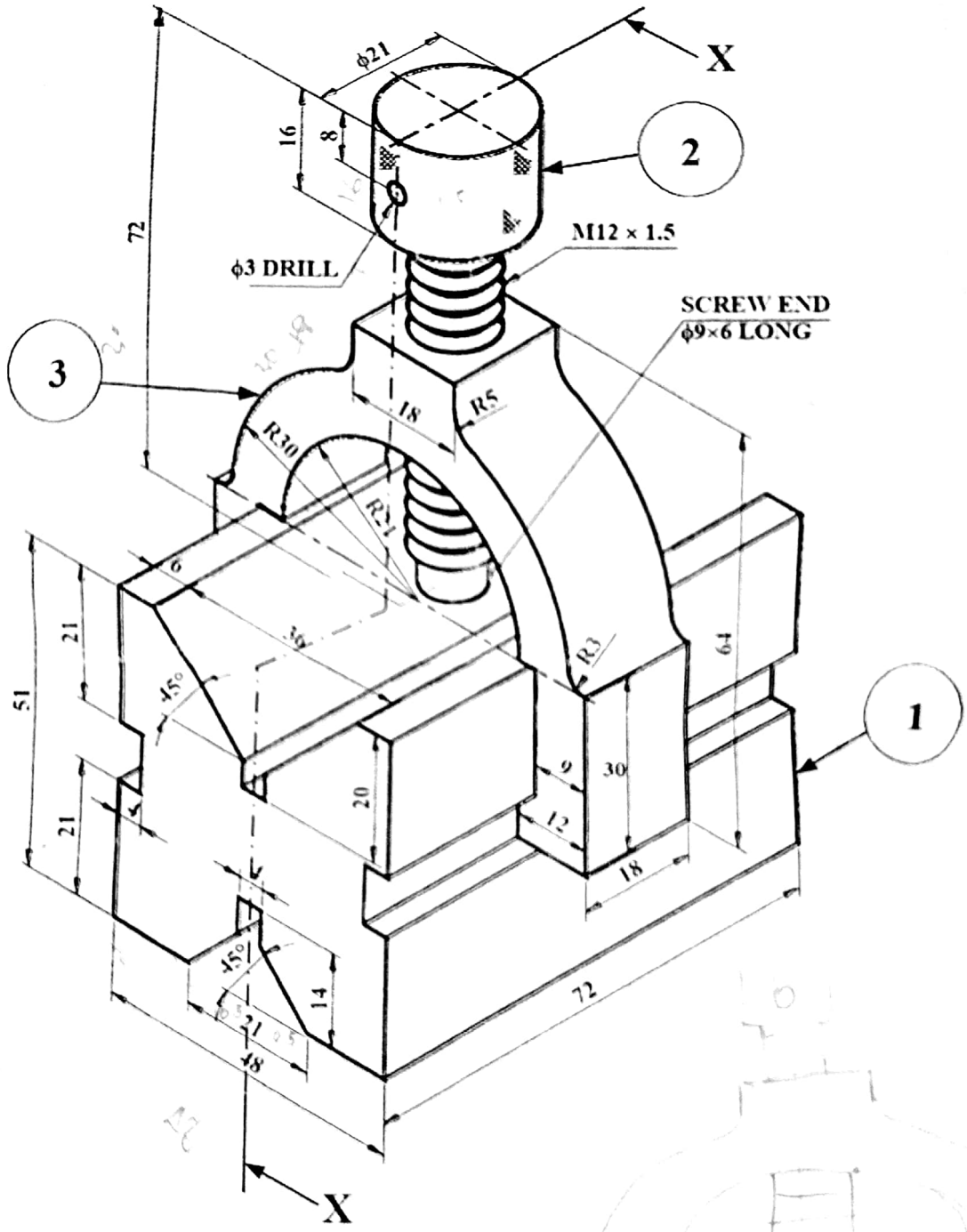

Figure 1 V-Block Assembly

Examiner: E. Yin / G. Quartey / D. Dzobo / C. Addy