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KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER
MAIN EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE IN RENEWBLE
ENERGY AND BIOFUELS TECHNOLOGY

COURSE CODE: REN 112

COURSE TITLE: ENGINEERING DRAWING 1

DURATION: 2 HOURS

DATE: 14/04/2021

TIME: 8:00-10:00AM

INSTRUCTIONS TO CANDIDATES

- Answer **QUESTION ONE** (Compulsory) and any other two (2) Questions.
- Indicate **answered questions** on the drawing paper.
- Answer each question on a separate drawing paper.

This paper consists of 3 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

QUESTION 1 (30 marks)

- Using A3 drawing paper, draw the border lines and title block indicating the title as EXAMINATION, SCALE, DATE, your REGISTRATION NUMBER, DRWG NO. and your NAME (6 marks).
- Construct an angle of 135° using a pair of compasses and ruler only (6 marks).
- Draw any acute angle and construct an arch touching the sides of the angle (6 marks).
- Draw two circles of equal radius of 30 mm whose centres are 140 mm apart and draw a common tangent internally (6 marks).
- Show conventional representation for steel, glass and concrete (6 marks).

QUESTION 2 (20 marks)

Draw the three orthographic views of Fig. 1 in First Angle projection and include at least six (6) dimensions (20 marks).

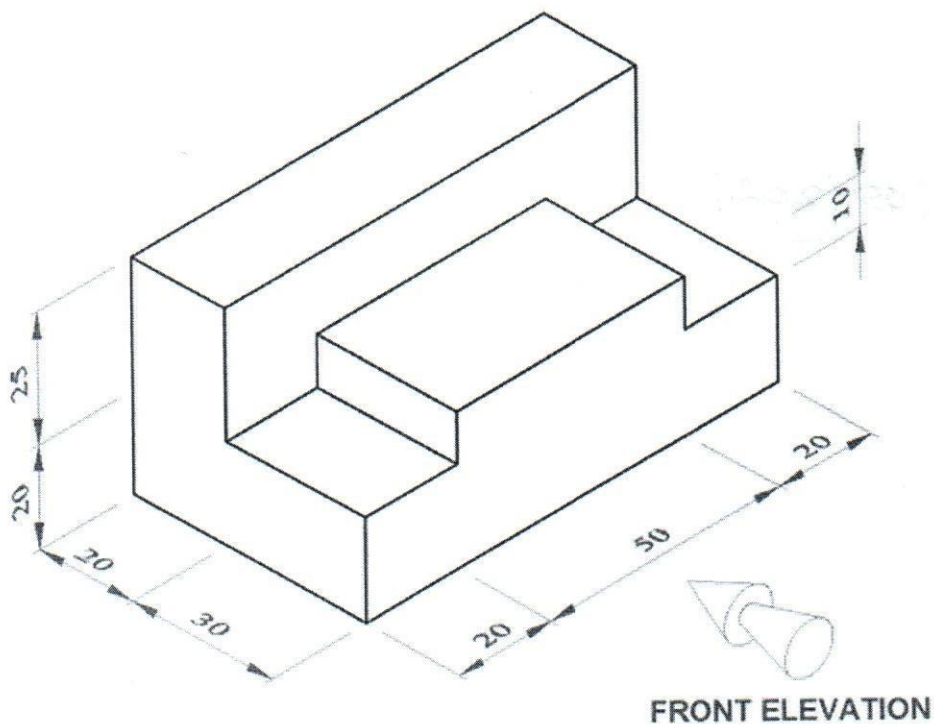


Fig. 1

QUESTION 3 (20 marks)

- Draw a regular pentagon of side 60 mm using the universal method (10 marks).
- Draw 2 circles of radius 40 mm and 20 mm respectively whose centres are 120 mm apart. Then draw a tangent touching the circles externally (10 marks).

QUESTION 4 (20 marks)

- Show any three (3) types of lines and state where they are used (6 marks).
- Draw a circle of radius 50 mm and divide it into 9 equal parts (14 marks)

QUESTION 5 (20 marks)

Using free hand sketching, show the sections of the front elevation shown by the arrow, end elevation and plan of Fig. 2 cut in the middle of every view.

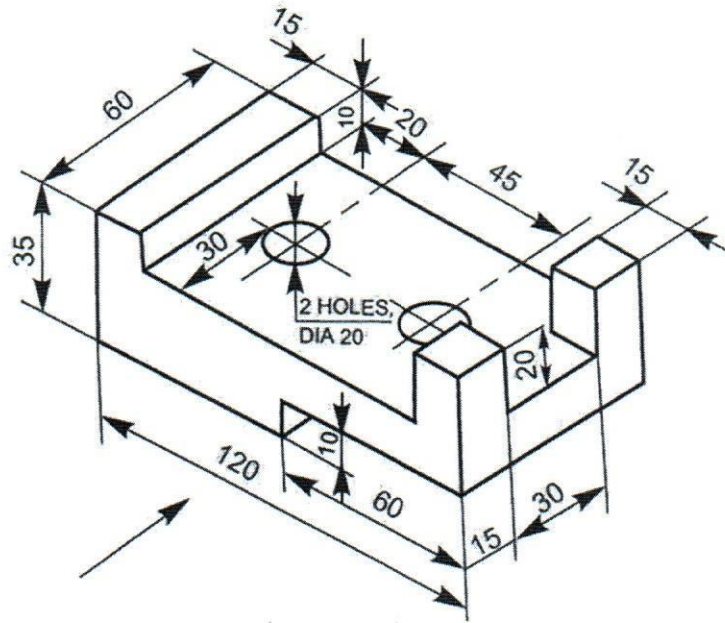


Fig. 2