

KAMUKUNJI DISTRICT KCSE EVALUATION TEST 2014

449/2

DRAWING AND DESIGN

Paper 2

July/Aug

2 ½ hours

INSTRUCTIONS TO CANDIDATES

(a) You should have the following for this examination:

4 sheets of drawing paper size A3

Drawing instruments.

- b) This paper has ***ONE COMPULSORY*** question.
- c) This paper is to be issued to the candidates ***30 minutes*** before the examination starts.
- d) The candidates are advised to spend this time ***understanding the design problem and planning the work*** on one of the drawing papers provided.
- e) ***This paper consists of 2 printed pages.***
- f) ***Candidates should check the question paper to ascertain that both pages are printed as indicated and that no questions are missing.***
- g) ***Candidates should answer the questions in English.***

DESIGN PROBLEM

A physically challenged person on wheelchair usually requires a special working table to perform different tasks. Design a suitable table for a challenged person considering the following:

- 1) It should be easily moved from one position to another.
- 2) It should be adjustable to comfortable heights.
- 3) The working top should be adjustable to any desired angle to inclination.
- 4) The table should have an extended top that is collapsible.
- 5) The table should have provision for placement of light stationery like pencils, pens pins, eraser and rulers.

REQUIREMENTS:-

- (a) Make- free-hand sketches of two possible solutions for your design. (6mks)
- (b) Select of the designs in (a) above and make a refined labelled pictorial sketch. (13 mks)
- (c) Make detailed sketches of the mechanism to allow for each of the considerations 1 -5 above. (16mks)
- (d) List two materials to be used and state one reason for the choice of each. (3mks)
- (e) State three methods of joining the parts and state where each is used. (3mks)