**NAME……………………………………… ADM NO. ……………… CLASS…………………**

**SIGN ………………………………DATE……………………………………………..**

**449/2**

**DRAWING AND DESIGN**

**Paper 2**

**2 ½ Hours**

***Kenya Certificate of Secondary Education (K.C.S.E)***

**INSTRUCTIONS TO CANDIDATES**

a) You should have the following for this examination:

4 sheets of drawing paper size A3

Drawing instruments

b) This paper consists of **ONE COMPULSORY** question.

c) This paper is to be issued to 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 sheet of paper provided.

***This paper consists of 2 printed pages.***

***Candidates should check the question paper to ensure that all pages are printed as indicated***

 ***Drawing and Design 449/2 Turn Over***

**DESIGN PROBLEM (40 MARKS)**

 **DESIGN PROBLEM (40MKS)**

Design a drawing board 650mmx470mm. To be used in you school considering the following:

1. The drawing board should be mobile to allow for easy movement on the floor.
2. The drawing boards should have height adjustment mechanism.
3. The board should be able to tilt from 00 to 450 according to the users’ preference.
4. There should be a provision for keeping drawing instruments safely when not in use.

 **Requirements**

a) Make a free hand pictorial sketch of two possible designs of the board. (6mks)

b) Select one of the design in (a) above and make a refined pictorial drawing and label six main parts. (13mks)

c) Draw exploded pictorial views showing the working mechanism for considerations     1, 2, 3 and 4 (16marks)

d) (i) Name three different materials and state where each is used in your design. (3mks)

 (ii) List four methods that could be used in joining various parts together. (2mks)

**THIS IS THE LAST PRINTED PAGE**