**449/2**

**DRAWING AND DESIGN**

**Paper 2**

**(PRACTICAL)**

**September, 2021**

2hours

**WISDOM CLUSTER EXAMINATIONS 2021**

**449/2**

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**(PRACTICAL)**

TIME: 2hours

**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 all the pages

are printed.

As indicated and that no questions are missing.

(g) Candidates should answer the questions in English.

**DESIGN PROBLEM 40 MARKS**

Tourists on the beach sometimes find it difficult to sunbath due to lack of devices on which they can lie as they enjoy the sun. Design a device that can be used for the said purpose.

**Consideration**

1. It should be able to accommodate the people of different heights.
2. It should be possible to tilt the head at an angle if there is need.
3. It should be possible to fold it and keep in a narrow space.
4. It should have provision that prevents the use from harsh rain conditions.
5. It should be made from at least two different materials.

**Conditions**:

1. Make **two** thumbnail sketches of the given design. ( 6 marks)
2. Select **one** of the designs in [a] and make a refined labeled sketch.(14 marks)
3. Make detailed exploded sketches of the mechanism used in considerations [1],[2],[3],[4] above. (16 marks)
4. Name **two** suitable materials and state why used. (2 marks)
5. State **two** methods of joining the device and state where is used. (2 marks)