**Term 1 - 2024**

**DRAWING AND DESIGN (449)**

**FORM ONE**

**Time: 2½ Hours**

**Name**: …………………………………… **Adm** **No**: ……………….

**School**: ………………………………………**Class**: …………………..

**Signature**: ………………………………………… **Date**: …………………...

**FOR EXAMINERS USE ONLY**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **TOTAL** |
| **MAXIMUM** | **9** | **6** | **4** | **4** | **5** | **7** | **10** | **8** | **6** | **6** | **6** | **7** | **6** | **6** | **10** | **100** |
| **STUDENT’S**  **SCORE** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**INSTRUCTIONS TO CANDIDATES.**

* 1. You should have the following for this examination:
     1. Drawing instruments
     2. 3 sheet of drawing paper size A3
  2. This paper consists of TWO sections A and B.
  3. Answer ALL the questions in section A and B.
  4. Questions in section A must be answered in the spaces provided.
  5. Questions in section B should be answered on the A3 drawing papers provided.
  6. All dimensions are in millimeters unless otherwise stated.
  7. Candidates may be penalized for not following the instructions given in this paper.

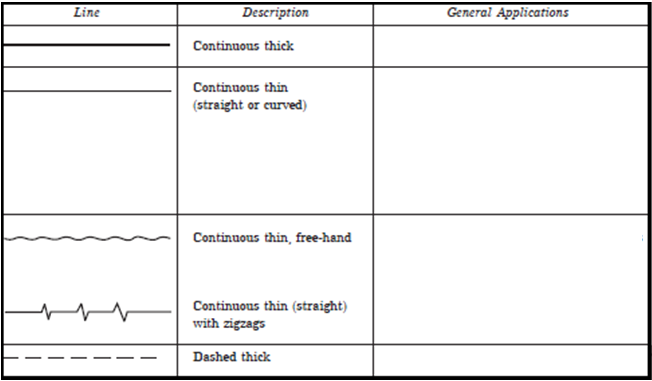
1. (a)State any six general objectives of drawing and design as a subject. (6 marks)

(b) Name three instruments used in linear measurement (3 marks)

1. Indicate the sizes of the following drawing papers (6 marks)

|  |  |  |
| --- | --- | --- |
| Paper name | size | |
|  | LENGTH | WIDTH |
| **A5** |  |  |
| **A4** |  |  |
| **A3** |  |  |
| **A2** |  |  |
| **A1** |  |  |
| **A0** |  |  |

1. Differentiate between the following terms as used in engineering. (4 marks)
2. Technical drawing
3. Artistic drawing
4. List four aims of technical drawing. (4mks)
5. state where each of the following types of lines are used (5mks)



1. (a) Give one reason why the following are used in drawing. (4marks)
   * 1. Symbols and abbreviations
     2. Lettering

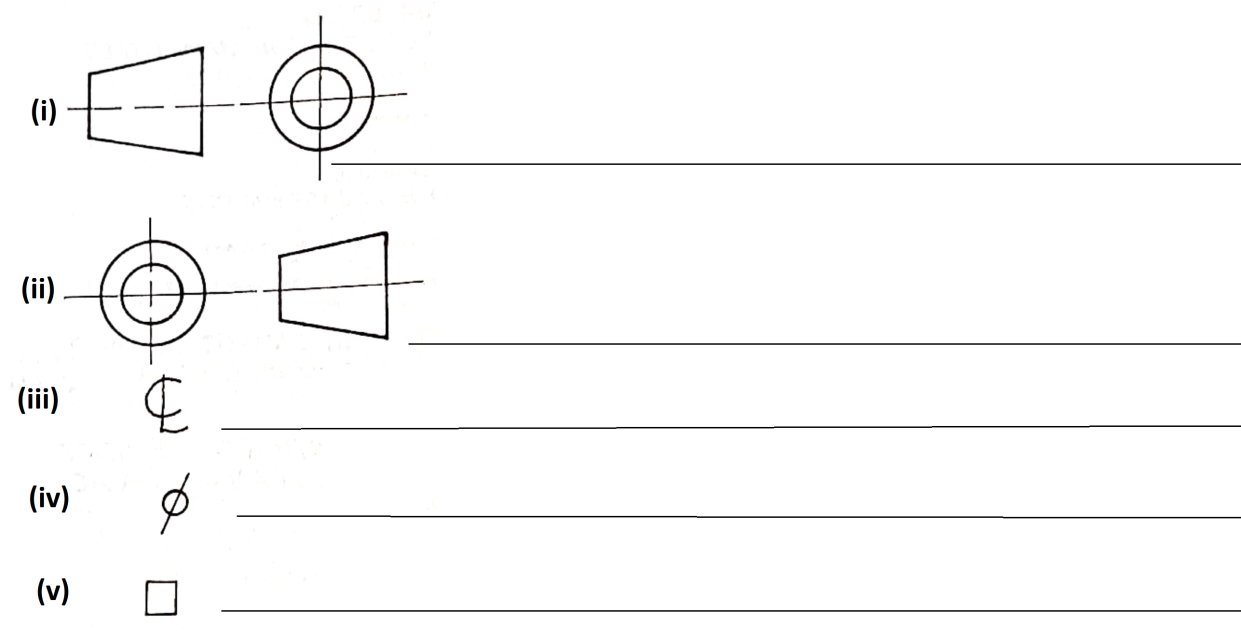
(b)State three factors that contribute to quality drawing. (3 marks)

1. Construct the following angles using a pair of compass , a pencil and a ruler only (10 marks)
2. 600
3. 300
4. 900
5. 37.50
6. 450
7. (a). Name four types of triangles and state their characteristics (8 marks)
8. Sketch the following types of drawing instruments pictorially (6 marks)
   1. Eraser
   2. Pair of compasses with a pencil attached

1. Construct a square whose diagonal is 65mm (6mks)
2. From the given line AB, illustrate how a line can be proportionally sub- divided into 10 equal portions. (6mks).

A B

1. Construct a kite when given the lengths of the diagonals as 71 mm and 53mm and the point of intersection is 53mm from one end of the longer diagonal. (7mks)
2. Construct an isosceles triangle with a base measuring 62mm and an altitude of 50mm (6mks)
3. What do the following symbols represent? ( 10 marks)



1. Draw the three views of the block shown below in first angle projection (6 marks)

