NAME…………………………………………………………………………………………………..…………………..CLASS…………….……….ADM…………………………….......

**DRAWING &DESIGN: [449/1]**

**FORM THREE**

**THEORY**

**2½hours**

**TERM I, 2023**

**Instructions to candidates**

1. *You should have the following for this examinations:*
* *Answer sheet;*
* *Drawing instruments;*
* *4 sheets of drawing paper size A3;*
* *Scale rule.*
1. *This paper consists of three sections:* ***A, B*** *and* ***C.***
2. *Answer ALL the questions in sections* ***A*** *and* ***B*** *and* ***C.***
3. *Questions in section* ***A*** *must be answered on the spaces provided in the answer sheets*
4. *Questions in section* ***B*** *and* ***C*** *should be answered on the* ***A3*** *papers provided.*

|  |  |  |  |
| --- | --- | --- | --- |
| SECTION A | SEC B | SECTION C |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | TOTAL |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**SECTION A (50 Marks)**

***Answer all the questions in this section in the spaces provided*.**

 (a) List two uses of TEE Square (2mks)

 (b) Why are different styles of lines used in drawing? (2 marks)

* + - * 1. define a circle (2 marks)
1. List any three differences between first angle and third angle projection. (3 marks)
2. Describe the duties the following personnel in engineering production Industries:

(a) Designer. (2 marks)

 (b) Draughts person. (2 marks)

1. Illustrate using sketches the difference between chain and datum dimensioning. (2marks)
2. Construct a regular octagon whose distance across the corners. ( 5 marks)
3. Sketch the three views of the block shown below in third angle projection (5marks)



1. **Figure below** shows two views of a truncated hexagonal pyramid. Complete the plan and draw an auxiliary view **Q** as projected through the elevation. (7 marks)



1. Sketch the two views given below in isometric (8 marks)



1. Construct a diagonal scale 20:1, to read to 5 mm. and with an accuracy of 0.02 mm. Show a reading of 3.76 mm. on the scale. (5 marks)
2. Sketch views given below in oblique (5marks)



**SECTION B (20 marks)**

***This question is compulsory***

1. **Figure 6** shows parts of a cable spool and its support bracket. Draw FULL SIZE in third angle projection, the following views of the assembly:
2. Sectional front elevation along the cutting plane P-P.
3. Plan.

Insert **four leading** dimensions. Do not show any hidden details.



**SECTION C (30Marks)**

*Answer Any Two Questions*

1. Draw full size an isometric view of a shaped block whose two views are shown in **Figure 7** taking **A** as the lowest point. (15 marks)



 **A**

**Figure 7**





