......Adm.No:..... Name:....

Class......Date:.....Date:

449/1DRAWING AND DESIGN TIME: $2\frac{1}{2}$ hours

KAMDARA JET - 2016

Instructions to candidates

- *a)* You should have following for this examination: Answer sheet: Drawing instruments; 3 sheets of drawing paper size A3; Scale rule.
- b) This paper consists of three sections: A, B and C.
- com or call. 0120502AT9 c) Answer all questions in section A and B and any other two questions from section C.
- d) Questions in section A must be answered on the answer sheet provided.
- e) Questions in section **B** and **C** should be answered on the A3 sheets of drawing paper provided.
- f) All dimensions are in millimeters unless otherwise stated.
- g) Candidates may be penalized for not following the instructions given in this paper.
- h) This paper consists of 7 printed pages.
- i) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- *i)* Candidates should answer the questions in English. tor thee past

Answer all questions in this section on the answer sheets provided

- 1. (a) Briefly explain the main duties of the following occupations that a directly connected with the learning of Drawing and Design: (3 marks)
 - i. A draughtsman
 - ii. A designer.
 - (b) Name any four levels of institutions of learning where learners can acquire technical education and skills in Kenya (2 marks)
- State the main reason why two point perspective drawing s are mostly drawn using angles of 45^o or 60^o & 30^o.
 (1 mark)
- 3. (a) Give any three reasons that would be considered for one to choose a good Computer Aided Design program. (3 marks)
 - (b) Name any four types of Computer Aided design programs
- 4. Using neat sketches show the convention used to indicate the following: (4 marks) (a) Internal threading
 - (b) First angle projection
 - (c) Centre line
 - (d) Diameter in drawings
- 5. (a) State the main objectives of drawing and design.(2 marks)(b)Differentiate between oblique cabinet and oblique cavalier.(2 Marks)
- 6. Using the three orthographic views of an object given, draw a two point perspective drawing of the object in aerial view (7 marks)





 Using the concentric circle method construct an ellipse with a major axis of 75mm and minor axis of 40mm. (6 marks) 8. Using the isometric view given, draw in good proportion, the orthographic views in 3rd angle projection. (6 marks)



9. The view given below show the front elevation of a regular pentagonal pyramid of base side 25mm, cut through two cutting plane X - Y and Y - Z. Draw the true shape of plane Y - Z.

(7 marks)



Turn over

10. The view shown represents a hexagonal prism interpenetrated by a square prism. Draw the line
of intersection and the development of the hexagonal prism(7 marks)



SECTION C (30 marks)

Answer any two questions from this section on the A3 paper provided

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12. Use the two orthographic views to draw an isometric view of the object to a scale of 1:1

13. Construct a diagonal scale in which 3mm represent 5mm and use it to construct the quadrilateral shown below.



14. Using the isometric drawing of the object given, draw the orthographic views of the object in 3^{rd} angle projection.



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