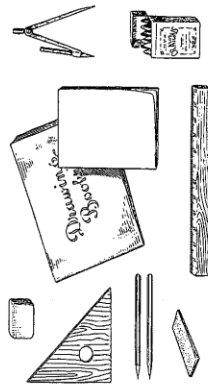


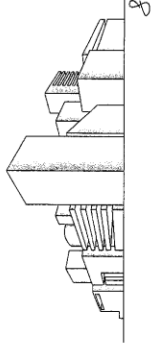
HILLCREST HIGH SCHOOL

MIDYEAR EXAMINATION

ENGINEERING, GRAPHICS & DESIGN



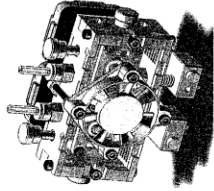
GRADE 10
2017



MARKS: 90 **TIME: 2 HOURS**

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 4 pages including the cover page and 3 questions.
2. All questions must be answered.
3. Unless specified otherwise, all questions are in First Angle Orthographic Projection.
4. Unless specified otherwise, all questions are to be completed to a scale of 1:1.
5. All answer sheets must be re-stapled in numerical order, even questions that are not attempted/blank.
6. All construction work must be shown, even if a stencil was used.
7. Print your NAME neatly on each page.
8. Use only the drawing sheets provided.
9. Your drawings should reflect neatness and accuracy.
10. All dimensions or detail not given may be assumed in good proportion.



QUESTION	SECTION	MARK	MODERATE	MAXIMUM
1	TANGENCY			25
2	CONSTRUCTION			25
3	SECTIONED CASTING			40
TOTAL				90
SYMBOL				100

NAME

MID-YEAR EXAM

GRADE 10

QUESTION 1
GEOMETRIC CONSTRUCTIONS

The following details refer to the adjacent sub-questions:

SPECIFICATIONS:

- Use instruments only.

REQUIREMENTS:

1. Use your knowledge on constructions and answer the questions in the space provided.

- Show all construction.

ASSESSMENT CRITERIA

You will be assessed on your ability to do the following

- divide a line into 8 equal parts (5)
- draw a pentagon with 20mm sides (6)
- draw an inscribed circle to a triangle (7)
- draw a circumscribed circle to a triangle (7)

25 MARKS

NAME: _____

PLEASE TURN OVER

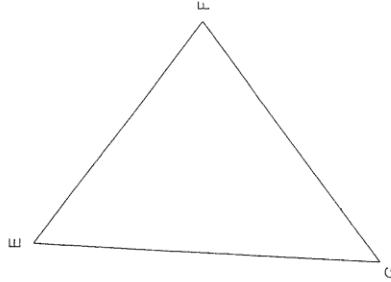
QUESTION 1.1

Draw a pentagon using CD as a base side. (6)



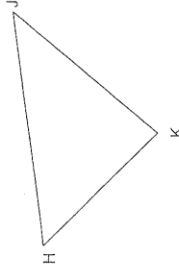
QUESTION 1.3

Draw an inscribed circle to the given triangle EFG. (7)



QUESTION 1.4

Draw a circumscribed circle to the given triangle HJK. (7)



QUESTION 3
40 MARKS
TRUE SHAPE &
DEVELOPMENT

The figure below shows the front view and top view of a Casting, drawn in third angle orthographic projection. The Casting is cut by two cutting planes A-A and B-B.

- Draw the following:
- 3.1. the sectional front view on the cutting plane A-A;
 - 3.2. the sectional top view on the cutting plane B-B;
 - 3.3. do not show any hidden detail;
 - 3.4. draw all centre lines and cutting planes;
 - 3.5. label both views.

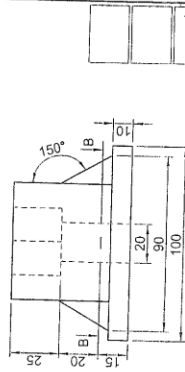
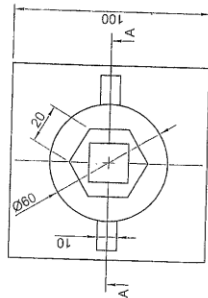
ASSESSMENT CRITERIA
You will be assessed on your ability to do the following:

Sectional Front View:

- draw and X-Hatch all areas of section;
- clearly show all areas that are not sectioned;
- complete the sectioned front view;
- draw the cutting plane;
- label the view.

Sectional Top View:

- draw and X-Hatch all areas of section;
- clearly show all areas that are not sectioned;
- complete the sectioned top view;
- draw the cutting plane;
- label the view.



NAME

ANSWER SHEET 3