

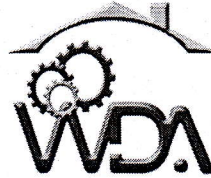
SUR - Technical Drawing

T120

Thursday, 19/11/2015

08:30 – 11:30

WORKFORCE DEVELOPMENT AUTHORITY



P.O. BOX 2707 Kigali, Rwanda Tel: (+250) 255113365

**ADVANCED LEVEL NATIONAL EXAMINATIONS, 2015,
TECHNICAL AND PROFESSIONAL TRADES**

EXAM TITLE: Technical Drawing

OPTION: Surveying (SUR)

DURATION: 3hours

INSTRUCTIONS:

The paper is composed of **three (3) Sections:**

Section **I:** Fourteen **(14)** questions, all **Compulsory.** **55marks**

Section **II:** Five (5) questions, **Choose any Three (3).** **30marks**

Section **III:** Three (3) questions, **Choose any One (1).** **15marks**

Every candidate is required to strictly obey the above instructions. Punishment measures will be applied to anyone who ignores these instructions.

Section I. Fourteen (14) Compulsory questions.

55marks

01. What do you understand by:

- a) Technical drawing
- b) Scale
- c) Longitudinal section

6marks

02. What is the use of the following materials in drawing?

- A. T-Square
- B. Set-square
- C. Drawing pins
- D. The compass
- E. Erasers

5marks

03. What are the requirements of a good drawing?

4marks

04. Differentiate sketching from drawing.

2marks

05. Differentiate technical drawing from artisanal drawing.

2marks

06. Outline four (4) careers in which technical drawing is applied?

4marks

07. Enumerate three (3) uses of scale in drawing.

3marks

08. What is technical lettering? Give the types of technical lettering.

3marks

09. What do you understand by dimensioning in drawing?

2marks

10. Give the general rules for dimensioning.

3marks

11. Give the Types and sizes of any six (6) drawing papers

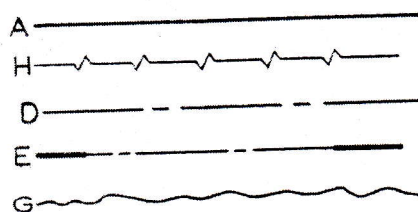
(of your choice) according to ISO specifications.

6marks

12. Define a title block. What is the necessary information we put in the title block?

6marks

13. Describe the conventional lines mentioned below:



5marks

14. What is the purpose of technical drawing?

4marks

Section II. Answer any three (3) questions of your choice

(Do not choose more than three questions). 30marks

15. Outline Five (5) types of views. What do you understand by perspective in drawing? **10marks**

16. What do you understand by "Projection" in technical drawing?
Discuss by explaining the two (2) types of projections in drawing. **10marks**

17. Determine three (3) types of pencils according to their hardness and give their use. Fill in the table below.

| GRADE OF PENCIL | HARDNESS |
|-----------------|----------|
| 9H | |
| 6H,5H,4H | |
| 3H | |
| 2H | |
| H | |
| F | |
| HB | |

10marks

18. Give the types of triangles by their angles and sides. Draw a triangle and mark all its parts. **10marks**

19. Name the types of scaling used here below:

- i) 1:50
- ii) 1:1
- iii) 5:1

What do you understand by arc? Give the process followed to find the center of an arc. **10marks**

Section III. Answer any one (1) question of your choice

(Do not choose more than one question).

15marks

20. (a) After defining the term "dimensioning" give the types of dimensioning

7marks

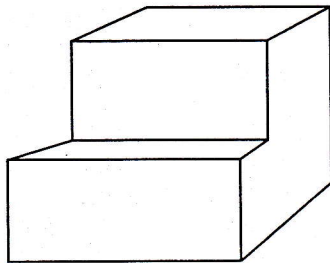
(b) What do the following symbols mean?



8marks

21. a) Enumerate the types of views

b) From the 3 dimensional down, develop the whole views.



15marks

22. (a) In drawing the selection of a paper and pencil are the important things which help you to have a proper drawing. Classify the types of papers according to their measurements.

(b) Give the difference between a photo and a map.

(c) Give the process to draw a circle or an arc of given radius to touch to given converging lines.

15marks