

08:30 – 11:30 AM

Index number

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TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

INSTRUCTIONS TO CANDIDATES: PART I (Answer Booklet)

1. A candidate should fill in the actual names and the index number on the cover of this questions and answer booklet on the provided place (Black Box).
2. It is illegal for a candidate to write any of his/her names, index number or a school name inside the answer booklet.
3. A candidate should check if all pages of the answer booklet are complete. No candidate should remove or tear any pages or part of it from the answer booklet.
4. A candidate should answer in the language in which the examination is set. (See page **(ii)**)
5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.
6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.
7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.
8. Write your answers on the 12 lined pages (From page 1 of 12 to page 12 of 12).
9. Use the last non-lined pages as draft.
10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

OPTION/TRADE: PLUMBING

SUBJECT: Pipe work drawing and DCG

DURATION: 3 hours

INSTRUCTIONS TO CANDIDATES: PART II (Question paper)

The paper is composed of two (2) Sections as follows:

Section I: Attempt all the Twelve (12) questions (60 marks)

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

Allowed materials:

- Ruler or square
- Calculator

Note:

Every candidate is required to carefully comply with the provided assessment instructions.

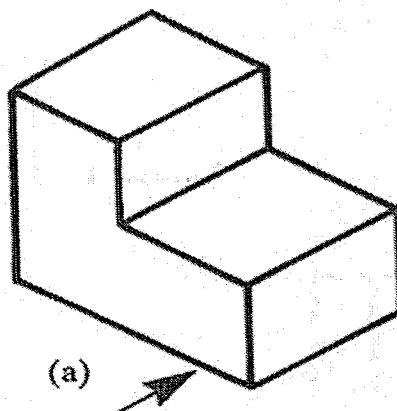
Section I : Attempt all the Twelve (12) questions (60 marks)

- 01. a)** Differentiate the term design from communication graphics
b) Identify clearly three (3) advantages of DCG in daily life of a plumber.
(5 marks)
- 02.** Identify any two (2) disadvantages of DCG
(5 marks)
- 03.** List any five (5) domains of application of CAD.
(5 marks)
- 04.** State at least five (5) applications of design and communication graphics in engineering department.
(5 marks)
- 05.** Differentiate 2D from 3D presentation of an object.
(5 marks)
- 06.** Define the following terms:
a) Plane
b) An oblique plane
c) Vanishing point
d) A sphere
e) An arc.
(5 marks)
- 07.** Differentiate the classification of solids.
(5 marks)
- 08. a)** What is the meaning of drawing?
(2 marks)
b) Differentiate the types of drawing
(3 marks)
- 09.** List and explain any five (5) drawing instruments and their uses in the drawing.
(5 marks)
- 10.** What is the dimension of paper from A0 to A4?
(5 marks)
- 11.** What does title block mean?
(5 marks)
- 12.** List any five (5) elements of title block.
(5 marks)

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

13. a) Define the term 'section' (1 mark)
- b) Differentiate any two (2) types of section. (3 marks)
- c) Outline at least six (6) roles of sectioning in drawing. (6 marks)
14. a) Explain the methods development
- b) Draw the development of a cylinder of 50 m of length and 30 m the radius of the base. (10 marks)
15. a) Differentiate the types of projection
- b) Enumerate the types of view used in drawing
- c) By using sketch, explain perspective projection as an isometric projection used in drawing. (10 marks)
16. Outline any five (5) advantages and disadvantages of CAD software. (10 marks)
17. An area of 250 cm^2 was measured on plan, using a planimeter.
- Given that the RF (Ratio factor /scale) is 1:500. Calculate the ground area in m^2 . (10 marks)

18. Draw the front view, top view, right view, Left view and Real view (Back view) of the following figure:



(10 marks)

Do not write anything on this page !

