



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

CIVIL TECHNOLOGY (CIVIL SERVICES)

GUIDELINES FOR PRACTICAL ASSESSMENT TASKS

GRADE 12

2025

These guidelines consist of 18 pages.

TABLE OF CONTENTS

	Page
SECTION 1	
1. INTRODUCTION	3
SECTION 2	
2. GUIDELINES FOR THE TEACHER	4
2.1 The structure of the PAT for Civil Technology	4
2.2 Management of the PAT	4
2.3 Administration of the PAT	5
2.4 Assessment and moderation of the PAT	5
2.5 Assessment	5
2.6 Moderation	5
SECTION 3	
3. GUIDELINES FOR THE LEARNER: CIVIL SERVICES TASKS	6
3.1 Instructions to the learner	6
3.2 Phase 1: Installation of low-level water closet	7
3.3 Marking guidelines for Phase 1	8
3.4 Phase 2: Frustum/Truncated conical kettle	9
3.5 Marking guidelines for Phase 2	11
3.6 Composite mark sheet	15
SECTION 4	
4. OTHER RELEVANT INFORMATION	16
4.1 Absence/Non-submission of task	16
4.2 Requirements for presentation	16
4.3 Recommended time frames for the completion of the PAT	16
4.4 Declaration of authenticity	17
SECTION 5	
5. CONCLUSION	18

SECTION 1**1. INTRODUCTION**

The 18 Curriculum and Assessment Policy Statement subjects which consist of practical components all include a practical assessment task (PAT). These subjects are:

- **AGRICULTURE:** Agricultural Management Practices, Agricultural Technology
- **ARTS:** Dance Studies, Design, Dramatic Arts, Music, Visual Arts
- **SCIENCES:** Computer Applications Technology, Information Technology, Technical Sciences, Technical Mathematics
- **SERVICES:** Consumer Studies, Hospitality Studies, Tourism
- **TECHNOLOGY:** Civil Technology, Electrical Technology, Mechanical Technology, Engineering Graphics and Design

A practical assessment task (PAT) mark is a compulsory component of the final promotion mark for all candidates offering subjects that have a practical component and counts 25% (100 marks) of the end-of-year examination mark. The PAT is implemented across the first three terms of the school year. This is broken down into different phases or a series of smaller activities that make up the PAT. The PAT allows for learners to be assessed regularly during the school year and it also allows for the assessment of skills that cannot be assessed in a written format, e.g. test or examination. It is therefore important that schools ensure that all learners complete the practical assessment tasks within the stipulated period to ensure that learners are resulted at the end of the school year. The planning and execution of the PAT differ from subject to subject.

SECTION 2

2. GUIDELINES FOR THE TEACHER (These guidelines must be explained clearly to the learners.)

2.1 The structure of the PAT for Civil Technology

The PAT accounts for the skills the learner has mastered. The PAT is assessed at intervals and requires the learner to engage in multiple practical sessions. During these weekly sessions, skills such as simulation, experimentation, hand skills, tool skills, machine skills and workshop practice are honed and perfected to the point where the learner may engage in the tasks set out for that term. The PAT accounts for 25% of the learner's promotion mark.

2.2 Management of the PAT

The PAT should commence in Term 1, as this is a lengthy and drawn-out process and CANNOT be left to the last minute. The model should be done over THREE terms starting in Term 1 and Phase 1 should be done concurrently with the model in Term 1.

- (a) Phase 1 must be completed, marked, and internally moderated by the end of Term 1.
- (b) Phase 2 must be completed, marked, and internally moderated by **1 September 2025** to allow sufficient time for external moderation.
- (c) The provincial education departments should conduct provincial moderation in September to ensure readiness for the national external moderation in October.
- (d) All the phases of the PAT are to be kept safe until the moderation process is completed at all levels (both provincial and national moderation).
- (e) **The internal moderator/departmental head must conduct moderation of the PAT throughout the year.**
- (f) It is imperative that the criteria are adhered to from the beginning, as this will form the basis for assessment.
- (g) Teachers cannot penalise learners on areas that are not included in the initial criteria.
- (h) When learners are selected during moderation (face moderation), they may be required to showcase their practical or drawing skills and knowledge of the content captured in the practical assessment task.

All **teachers** must **design a pacesetter** in line with the time frames specified in the PAT to indicate the completion dates for the different phases of the PAT. The teacher must manage this process to avoid crisis management and unnecessary stress closer to the completion date of the PAT.

The submission dates for the different phases of the PAT, as indicated in the pacesetter, should be given to the learners in writing. By adhering to these guidelines, the assessment and moderation process should be smooth and fair, ensuring that all learners are evaluated consistently and accurately.

2.3 Administration of the PAT

The PAT should be based on real-life situations and should be administered and completed under controlled conditions.

After studying the guidelines, teachers must fully explain the requirements of the different phases of the PAT, inclusive of the criteria as indicated in the assessment tools and mark schedules, to the learners. This will ensure that learners and teachers have a common understanding of the assessment tools and what is expected of the learners.

Teachers are requested to make copies of **SECTIONS 3 to 5** of this document and hand it to the learners not later than the **first week after the opening of schools in January 2025**.

The products/models should not leave the classroom/workshop and must always be kept in a safe place when learners are not working on them.

2.4 Assessment and moderation of the PAT

The PAT for Grade 12 is externally set and moderated, but internally assessed by the teacher and moderated by the internal moderator/departmental head.

2.5 Assessment

Frequent developmental feedback is needed to guide and support the learner to ensure that the learner is on the right track.

Both formal and informal assessments should be conducted at the different phases of the PAT. Informal assessment may be conducted by the learner himself or herself, by a peer group, or by the teacher. Formal assessment should always be conducted by the teacher and the results will be recorded.

The teacher must consider the requirements of the assessment of all the phases of the PAT and therefore plan the assessment programme of the PAT accordingly.

2.6 Moderation

During moderation of the PAT, all phases of the PAT must be presented to the internal moderator as well as the external moderator.

Where required, the moderator should be able to call the learner to explain the function and working principles and request the learner to exhibit the skills acquired during practical sessions for moderation purposes.

SECTION 3**3. GUIDELINES FOR THE LEARNERS: CIVIL SERVICES TASKS**

Learner's name: _____

Time Allowed: Term 1 to Term 3**The practical assessment task (PAT) consists of TWO phases to be completed over THREE terms.****The PAT should be done over THREE terms starting in Term 1 with Phase 1 and Phase 2.****TIME SCHEDULE FOR THE COMPLETION OF THE PAT:****It is recommended that learners and teachers use this time schedule to finish the PAT in the allocated time.**

TERM	WORK TO BE DONE	
Term 1	Phase 1	Installation of a low-level water closet
Term 1	Phase 2 (Part 1)	Research, drawings and calculations
Term 2	Phase 2 (Part 2)	Measuring, marking, bending and cutting of sheet metal
Term 3	Phase 2 (Part 3)	Assembling all components of the kettle

3.1 Instructions to the learner

- This practical assessment task (PAT) counts 25% of your final promotion mark.
- All the work you produce must be your own effort.
- Use your discretion where dimensions and/or information have been excluded or omitted.
- Where available you may use electronic equipment, e.g. cellphones, cameras and digital cameras to document your progress.
- **The product/model should NOT leave the classroom/workshop and must be kept in a safe place at all times when you are not working on it.**

3.2 Phase 1: Installation of a low-level water closet

Term: 1
Duration of phase 1: 3 hours per learner
Mark allocation: 20 marks

TASK:

Install a low-level water closet pan, a cistern and sanitary fixtures, to be connected to the water supply and the soil pipe.

INSTRUCTIONS:

- Use any suitable board product as a base (on the floor) and a backing (against the wall) to secure the water-closet pan and cistern.
- Fit the pan collar, position the water-closet pan correctly and secure the water-closet pan.
- Attach the cistern.
- Connect the flush pipe.
- Attach the stop cock or Ball-O-Stop valve and flexi hose.
- Test the connections between the water closet and cistern for leaks.
- Attach the toilet seat.
- Remove installed water closet and sanitary fixtures after being assessed and clean the work area.

NOTE:

- The sanitary fittings and accessories do not have to be new.
- The flush mechanism and handle are already installed in the cistern.
- The water supply pipe and the soil pipe should be installed by the teacher.

3.3 Marking guidelines for Phase 1

ASSESSMENT CRITERIA FOR THE INSTALLATION OF A LOW-LEVEL WATER CLOSET				
LEARNER'S NAME AND SURNAME: _____				
ASSESSMENT CRITERIA	GOOD/EXCELLENT	AVERAGE	POOR/NOT ATTEMPTED	MODERATED MARK
	8–10	4–7	0–3	0–10
Pan collar fitted and water closet pan correctly positioned				
Water closet pan correctly secured (check if it is level in two directions)				
Cistern correctly attached (check if it is level)				
Flush pipe correctly connected				
Stop cock or Ball-O-Stop valve and flexi hose correctly attached.				
Test the connections between water closet and cistern for leaks				
Toilet seat correctly attached				
Water closet and sanitary fixtures removed after being assessed and work area is cleaned				
TOTAL OUT OF 80				
CONVERTED TOTAL OUT OF 20				

It is mandatory to record video clips and photos of the learner performing the task and keep these video clips and photos electronically on a disc or memory stick (backup) at the school, which should then be provided as evidence during moderation.

3.4 Phase 2: Frustrum/Truncated conical shaped kettle

Terms: 1, 2 and 3

Duration of phase: 20 hours

TASK:

You are required to design and make a frustrum/truncated conical shaped kettle with a spout, handle and a lid that can be used on a campfire, a braai, or a gas stove when there is no electricity available to heat water.

INSTRUCTIONS:

- Research different types of designs of frustrum/truncated conical-shaped kettles with a lid, spout and handle. Merely downloading pictures and information from the internet is NOT research, this is only collecting information. Research must include criteria to be researched and a final submission by the learner to show how he/she reached conclusions based on collected information.
- Draw (freehand or with instruments) at least THREE designs of frustrum/truncated conical shaped kettles with a lid, spout, and handle.
- Use the formula $V = \frac{1}{3} \pi h (R^2 + Rr + r^2)$ and calculate the dimensions of the frustrum/truncated conical shaped kettle.
- Select the preferred design and draw a scale drawing of the front and top views (first-angle orthographic working drawings) of the kettle that you are going to make. Show ALL measurements/dimensions on your drawing.
- Draw to a scale of 1 : 1 the development of the conical surface and make provision for the spout.
- Trace the shape of the development on any appropriate material and cut out to use as a template.
- Develop templates to a scale of 1 : 1 for the base with a seam, the spout and the handle as needed.
- Compile a material list and a list of tools needed to make the kettle.

Use the following specifications:

- The kettle must be able to hold approximately six cups of water.
- The conical body, lid and base must be made of sheet metal.
- The conical body surface of the kettle must have a 5 mm safe edge.
- The base of the kettle must be provided with a seam.
- The spout and handle could be made of sheet metal or copper pipe/galvanised pipe or any other suitable material and appropriate fittings to form the required shape.
- Use appropriate joining methods.
- Learners should be innovative and creative when making the kettle.

NOTE: Evidence of research, drawings, calculation of dimensions, templates, material lists and a list of tools, as well as the model, should be available for moderation.

Formula to calculate the dimensions of the frustrum/truncated conical shaped kettle:

$$V = \frac{1}{3} \pi h (R^2 + Rr + r^2)$$

Where:

- V is volume
- h is height
- R is base radius
- r is the radius at the lid

HINT: Determine a suitable radius for the base and at the lid of the frustrum/truncated kettle to calculate the height of the kettle to hold approximately 6 cups of water.

3.5 Marking guidelines for Phase 2

ASSESSMENT OF THE FRUSTRUM/TRUNCATED CONICAL-SHAPED KETTLE				
LEARNER'S NAME AND SURNAME: _____				
ASSESSMENT CRITERIA	GOOD/EXCELLENT	AVERAGE	POOR/NOT ATTEMPTED	MODERATED MARK
PLANNING	8–10	4–7	0–3	0–10
Research different types of conical kettles made of sheet metal with lids, spouts and handles				
THREE freehand/instrument drawings of different designs of the frustrum/truncated conical shaped kettle				
Determine and calculate the dimensions of the frustrum/truncated conical kettle				
Compile a material list and a list of tools needed to make the kettle				
TOTAL: 40				
SCALE DRAWINGS OF PREFERRED DESIGN	4–5	2–3	0–1	0–5
Correctness of front view				
Correctness of top view				
Dimensions indicated on views				
TOTAL: 15				

ASSESSMENT CRITERIA	GOOD/EXCELLENT	AVERAGE	POOR/NOT ATTEMPTED	MODERATED MARK
SCALE DRAWING OF DEVELOPMENT	11–15	6–10	0–5	0–15
Drawing of development, tracing and cutting out of the template for the body of the kettle				
TOTAL: 15				
FABRICATION OF/MANUFACTURING THE FRUSTUM/ TRUNCATED CONICAL SHAPE	8–10	5–7	0–4	0–10
Use a template to mark out the development of the body of the kettle and make provision for the spout				
Cut out the development of the conical surface and make provision for the spout using appropriate tools				
Bend the body of the kettle with safe edges				
Join the body of the kettle conical surface using appropriate joining methods				
TOTAL: 40				
FABRICATION OF/MANUFACTURING THE BASE FOR THE CONICAL SURFACE	4–5	2–3	0–1	0–5
Use a template to mark and cut out the base				
Bend the seam of the base				
Join the base to the body of the kettle using appropriate joining methods				
TOTAL: 15				

ASSESSMENT CRITERIA	GOOD/EXCELLENT	AVERAGE	POOR/NOT ATTEMPTED	MODERATED MARK
SPOUT (SHEET METAL/COPPER/GALVANISED STEEL/ANY OTHER SUITABLE MATERIAL)	4-5	2-3	0-1	0-5
Use a template to mark and cut out the spout				
Bend the spout to shape				
Join the spout to the conical surface				
TOTAL: 15				
HANDLE (SHEET METAL/COPPER PIPE/GALVANISED PIPE/ANY OTHER SUITABLE MATERIAL)	4-5	2-3	0-1	0-5
Mark and cut out the handle				
Bend/Shape/Assemble the handle				
Join handle to conical surface using appropriate joining methods				
TOTAL: 15				
FINISHING	4-5	2-3	0-1	0-5
Cleaning of joints and finishing of the final product				
TOTAL: 5				
FINAL PRODUCT	4-5	2-3	0-1	0-5
Neatness, appearance and functionality of the kettle				
Verify if kettle can hold six cups of water				
TOTAL: 10				

ASSESSMENT CRITERIA	GOOD/EXCELLENT	AVERAGE	POOR/ NOT ATTEMPTED	MODERATED MARK
INNOVATION AND CREATIVITY	4–5	2–3	0–1	0–5
The learner enhances his/her chosen design by adding features to improve the appearance and functionality of the kettle				
TOTAL: 5				
GENERAL ASPECTS	4–5	2–3	0–1	0–5
Adherence to deadlines				
TOTAL: 5				
TOTAL OUT OF 180				
CONVERTED TOTAL OUT OF 80				

3.6 Composite mark sheet for Civil Services PAT

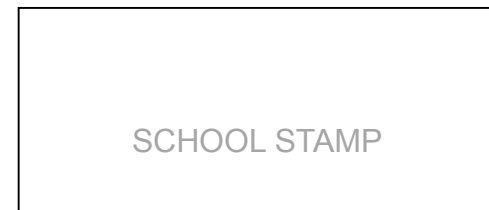
NO.	SURNAME AND NAME OF LEARNER	PHASE 1		PHASE 2 (MODEL)											TOTAL					
		TERM 1		PART 1 TERM 1		PART 2 TERM 2			PART 3 TERM 3											
		INSTALLATION OF WATER CLOSET	MODERATED MARK	PLANNING	SCALE DRAWINGS OF PREFERRED DESIGN	SCALE DRAWING OF DEVELOPMENT	FABRICATION OF FRUSTUM/TRUNCATED CONICAL SHAPE	FABRICATION OF BASE	SPOUT	HANDLE	FINISHING	FINAL PRODUCT	INNOVATION AND CREATIVITY	GENERAL ASPECTS	TOTAL PHASE 2	MODERATED MARK	CONVERTED MARK	MODERATED MARK	FINAL TOTAL (PHASE 1 + PHASE 2)	MODERATED MARK
		20	20	40	15	15	40	15	15	15	5	10	5	5	180	180	80	80	100	100
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
	TOTAL																			

Signature of (Teacher)

Date (dd/mm/yy)

Signature of (Moderator)

Date (dd/mm/yy)



SECTION 4

4. OTHER RELEVANT INFORMATION

4.1 Absence/Non-submission of task (What are the consequences?)

The absence of a PAT will be dealt with in accordance with the regulations as stipulated in the *National Policy on Protocol for Assessment Grades R–12*, page 6, Chapter 3, paragraphs 7 and 8.

The *National Protocol for Assessment Grades R–12*, Chapter 3, paragraph 8, subsection (4) clearly states that the absence of a practical assessment task mark will result in the candidate, registered for that particular subject, receiving an incomplete result.

4.2 Requirements for presentation

The following must be presented by the candidate for assessment and moderation:

- Phase 1: Mark sheet with evidence
- Phase 2: Evidence of planning and scale drawings of the model
- Phase 2: Mark sheet with completed model
- The candidate's name and class must be clearly indicated on all components of the PAT
- Completed Declaration of Authenticity with school stamp

The following document must be presented by the teacher for moderation:

- A composite mark sheet (ONE composite mark sheet comprising all candidates' names and marks for all phases)

4.3 Recommended time frames for the completion of the PAT

Term 1:

- Phase 1 and Phase 2 (Part 1)

Term 2:

- Phase 2 (Part 2)

Term 3:

- Phase 2 (Part 3)

The product/model should be manufactured in the workshop under the teacher's supervision.

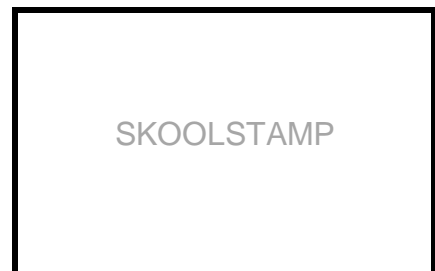
NOTE: The teacher should plan properly and manage the available resources so that all learners will be kept busy with some part of the tasks throughout the year. **PAT tasks must be completed, marked, and internally moderated by 1 September 2025.**

4.4 Declaration of authenticity

NAME OF SCHOOL:

NAME OF LEARNER:.....

NAME OF TEACHER:



I hereby declare that the practical assessment task submitted for assessment is my own, original work and it has not been submitted for moderation previously.

SIGNATURE OF LEARNER

DATE (dd/mm/yy) (SUBMITTED)

As far as I know, the above declaration by the candidate is true and I accept that the work offered is his/her own.

SIGNATURE OF TEACHER

DATE (dd/mm/yy)

SECTION 5**5. CONCLUSION**

On completion of the practical assessment task learners should be able to demonstrate their understanding of the built environment/industry, enhance their knowledge, skills, values and reasoning abilities as well as establish connections to life outside the classroom and address real world challenges. The PAT furthermore develops learner's life skills and provides opportunities for learners to engage in their learning.