



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

CIVIL TECHNOLOGY (CIVIL SERVICES)

GUIDELINES FOR PRACTICAL ASSESSMENT TASKS

GRADE 12

2024

These guidelines consist of 15 pages.

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SECTION 1**1. INTRODUCTION**

The following 18 Curriculum and Assessment Policy Statement subjects which contain a practical component must include a practical assessment task (PAT).

- **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 on a regular basis 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 differs 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 have mastered. This 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 2024** to allow sufficient time for external moderation.
- (c) All the phases of the PAT are to be kept safely until the moderation process is completed at all levels (both provincial and national moderation).
- (d) **The internal moderator/departmental head must conduct moderation of the PAT throughout the year.**
- (e) It is imperative that the criteria are adhered to from the beginning, as this will form the basis for assessment.
- (f) Teachers cannot penalise learners on areas that are not included in the initial criteria.
- (g) 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/gained 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.

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 2024**.

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 assessment should be conducted on 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 wash hand basin
Term 1	Phase 2 (Part 1)	Research, drawings and calculations
Term 2	Phase 2 (Part 2)	Measuring, marking, bending and cutting of sheet metal and copper pipe/galvanised pipe
Term 3	Phase 2 (Part 3)	Assembling all components of the watering can

3.1 Instructions to the learner

- This practical assessment task (PAT) counts 25% of your final promotion mark.
- All 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, 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 wall-hung wash hand basin**Term: 1****Duration of Phase 1: 3 hours per learner****Mark allocation: 20 marks****TASK:**

Install a wall-hung wash hand basin with pillar taps or a pillar mixer tap, pipes and fittings connected to the hot- and cold-water supply pipes and the water trap connected to the waste pipe.

INSTRUCTIONS:

- Connect stop cocks or Ball-O-Stop valves to the hot- and cold-water supply pipes.
- Attach the basin to the wall.
- Attach the pillar taps or pillar mixer tap to the basin.
- Attach flexi hoses to the taps and stop cocks or Ball-O-Stop valves.
- Install basin waste fitting to the basin.
- Install the water trap to the basin waste fitting and waste pipe.
- Remove the installed wash hand basin and equipment after being assessed and clean the work area.

NOTE:

- The basin, taps, pipes and fittings do not have to be new.
- The pre-fitted bolts for the wash hand basin, the hot and cold-water supply pipes and the wall-mounted waste pipe should be installed by the teacher.
- It is recommended that the teacher attach a sheet of shutter board or similar material to a wall in the workshop so that the installation of the basin can be done against the timber to prevent unnecessary damage to brick walls.

3.3 Marking guidelines for Phase 1

ASSESSMENT CRITERIA FOR THE INSTALLATION OF A WASH HAND BASIN				
LEARNER'S NAME AND SURNAME: _____				
ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	POOR/NOT ATTEMPTED	MODERATED MARK
	8–10	4–7	0–3	0–10
Stopcocks (Ball-O-Stop valves) correctly attached to the hot and cold-water supply pipes				
Basin correctly attached to the wall (Check if basin is level)				
Correct installation of pillar taps or basin mixer tap				
Flexi hoses correctly attached to the taps and stop cocks				
Basin waste fitting correctly installed				
Water trap correctly connected to the basin waste fitting				
Waste pipe correctly connected to the water trap				
Wash hand basin and equipment removed after being assessed and work area is cleaned				
TOTAL OUT OF 80				
CONVERTED TOTAL OUT OF 20:				

It is recommended that video clips and photos of the learner performing the task be kept electronically at the school and on a disc or memory stick (backup).

3.4 Phase 2: Cylindrical watering can**Terms: 1, 2 and 3****Duration: 20 hours****TASK:**

You are required to design and make a cylindrical watering can with a spout and handle.

INSTRUCTIONS:

- Research different types of designs of watering cans with a 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 new conclusions based on collected information.
- Use the formula $V = \pi r^2 h$ and calculate the dimensions of the cylindrical watering can.
- Draw (freehand or with instruments) at least THREE designs of a cylindrical watering can with a spout and handle.
- Select the preferred design and draw a scale drawing of the front and top views (first-angle orthographic working drawings) of the watering can that you are going to make. Show ALL measurements/dimensions on your drawing.
- Draw to scale 1 : 1 the development of the cylindrical surface and make provision for the spout.
- Trace down the shape of the development on any appropriate material and cut out to use as templates.
- Compile a schedule of stages and timeframes for the completion of the cylindrical watering can.

Use the following specifications:

- The watering can must be able to hold a quantity of five litres of water.
- The cylindrical surface must be made from sheet metal.
- The spout should be made of copper pipe/galvanised pipe or sheet metal.
- The cylindrical surface of the watering can must have a 5 mm safe edge.
- The base of watering can must be provided with a seam.
- The handle for the watering can should be made of copper pipe/galvanised pipe and capillary/compression elbows to form the required shape.
- Apply the appropriate joining methods.
- Learners should be innovative and creative in the making of the watering can.

NOTE: Evidence of research, drawings, calculation of volume, stages in making the model, templates, cutting lists, as well as the model should be available for moderation.

3.5 Marking guidelines for Phase 2

ASSESSMENT OF THE CYLINDRICAL WATERING CAN				
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 on different types of cylindrical watering cans made of sheet metal with spouts and handles				
THREE freehand/instrument drawings of different designs of the watering can				
Calculate the size of the watering can				
Compiling a schedule of stages and timeframes for the completion of the watering can				
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				
SCALE DRAWING OF DEVELOPMENT	11–15	6–10	0–5	0–15
Development drawings and tracing and cutting out of templates of the watering can				
TOTAL: 15				
FABRICATION OF CYLINDRICAL SURFACE	8–10	5–7	0–4	0–10
Use template to mark out the development of the cylindrical surface, base and the hole for the spout using appropriate tools				
Cut out the development of the cylindrical surface and the hole for the spout using appropriate tools				
Bend the cylindrical surface with safe edges				
Join the cylindrical surface using appropriate joining methods				
TOTAL: 40				

ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	POOR/ NOT ATTEMPTED	MODERATED MARK
FABRICATION OF BASE FOR THE CYLINDRICAL SURFACE	4–5	2–3	0–1	0–5
Marking and cutting out of the base				
	8–10	4–7	0–3	0–10
Joining the base to the cylindrical surface				
TOTAL: 15				
SPOUT (COPPER/GALVANISED PIPE/SHEET METAL)	4–5	2–3	0–1	0–5
Marking and cutting of spout				
Joining the spout to the cylindrical surface				
TOTAL: 10				
HANDLE (COPPER PIPE/GALVANISED PIPE)	8–10	5–7	0–4	0–10
Marking, cutting and forming of copper pipe/galvanised pipe for the handle				
Joining of handle using capillary fittings/compression fittings to the cylindrical surface				
TOTAL: 20				
FINISHING OF PRODUCT	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 watering can				
Verifying if watering can hold at least five litres of water				
TOTAL: 10				
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 watering can				
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

	NAME OF SCHOOL AND LOGO	PHASE 1		PHASE 2 (MODEL)										TOTAL						
		TERM 1		PART 1 TERM 1		PART 2 TERM 2			PART 3 TERM 3											
		INSTALLATION OF WASH HAND BASIN	MODERATED MARK	PLANNING	SCALE DRAWINGS OF PREFERRED DESIGN	SCALE DRAWING OF DEVELOPMENT	FABRICATION OF CYLINDRICAL SURFACE	FABRICATION OF BASE	COPPER/GALVANISED PIPE/SHEET METAL SPOUT	COPPER/GALVANISED PIPE HANDLE	FINISHING	FINAL PRODUCT	INNOVATION AND CREATIVITY	GENERAL ASPECTS	TOTAL PHASE 2	MODERATED MARK	CONVERTED TOTAL	MODERATED MARK	TOTAL (PHASE 1 + PHASE 2)	MODERATED MARK
NO.	SURNAME AND NAME OF LEARNERS	20	20	40	15	15	40	15	10	20	5	10	5	5	180	180	80	80	100	100
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
	TOTAL													TOTAL						

Signature of (Teacher)_____
Date (dd/mm/yy)_____
Signature of (Moderator)_____
Date (dd/mm/yy)

SCHOOL STAMP

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: A 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 properly plan 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 2 September 2024.**

4.4 Declaration of authenticity

NAME OF THE SCHOOL:

NAME OF LEARNER:.....

NAME OF TEACHER:

SCHOOL STAMP

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 own learning.