



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

CIVIL TECHNOLOGY (CONSTRUCTION)

GUIDELINES FOR PRACTICAL ASSESSMENT TASKS

GRADE 12

2021

These guidelines consist of 13 pages.

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SECTION 1

1. INTRODUCTION

The 18 Curriculum and Assessment Policy Statement subjects which contain a practical component 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 and 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 has 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 particular 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. Phase 1 must be completed, marked and internally moderated by the end of Term 1. Phase 2 must be completed, marked and internally moderated by **30 September 2021**.

- (a) All the phases of the PAT should be completed and presented for assessment by the end of **September 2021** to allow sufficient time for the external moderation.
- (b) During this phase, the teacher will do any final assessments that are outstanding. All the phases of the PAT are kept safely until the moderation process is completed (both provincial and national moderation).
- (c) **The internal moderator/HOD must conduct PAT moderation throughout the year.**

- (d) It is imperative that the criteria are adhered to from the beginning, as this will form the basis for assessment.
- (e) Teachers cannot penalise learners on points that are not included in the initial criteria.
- (f) When learners are selected during moderation (face moderation), they may be required to showcase their skills and knowledge.

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 and 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 them to the learners not later than the **first week after the opening of schools in February 2021**.

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

2.4 Assessment and moderation of the PAT

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

2.5 Assessment

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

Both formal and informal assessment should be conducted during the different phases of the PAT. Informal assessment may be conducted by the learner himself/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 take into account 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 the moderation of the PAT, all the 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 on the learner to explain the function and principles of operation and also request the learner to exhibit the skills acquired during practical sessions for moderation purposes.

SECTION 3**3. GUIDELINES FOR THE LEARNERS****CONSTRUCTION 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	Joining steel to concrete
Term 1	Phase 2	Research, sketches and cutting list
Term 2	Phase 2	Making of formwork and reinforcement
Term 3	Phase 2	Casting of concrete, striking of formwork, finishing

3.1 Instructions to the learner

- This 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.
- 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: Joining steel to concrete**Term: 1****Duration of Phase 1: 4 hours per learner****Mark allocation: 20 marks****TASK:**

Joining of steel base plate to a concrete base

INSTRUCTIONS:

- Measure and make a column with a square base plate to fit on a concrete foundation of 100 mm x 100 mm. (The column and base plate can be made from any suitable material.)
- Cast the concrete foundation with FOUR bolts cast into the concrete and keep it in position with a template that corresponds with the holes in the base plate.
- When the concrete is dry, strike the formwork and then remove the template that keeps the bolts in position.
- Place the column with the base plate onto the concrete foundation and fasten using nuts with washers.

3.3 Marking guidelines for Phase 1

ASSESSMENT OF THE STEEL COLUMN WITH BASE PLATE			
LEARNER'S NAME AND SURNAME: _____			
ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	POOR/ NOT ATTEMPTED
PLANNING	8–10	4–7	0–3
Measure, cut and make column			
Measure, cut and drill FOUR holes into base plate			
Join the base plate to the column			
CASTING OF CONCRETE	10–15	5–10	0–5
Casting of concrete for foundation with FOUR bolts imbedded in concrete and kept in position with template of base plate			
Securing the column with base plate to the concrete foundation			
TOTAL MARK OUT OF 60:			
CONVERTED MARK 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: Concrete garden bench

Term: 1, 2 and 3

Duration: 20 hours

TASK:

You are required to design and make a concrete garden bench.

INSTRUCTIONS:

- Research different types of designs of reinforced concrete garden benches seating one person.
- Draw **(freehand or with instruments)** at least THREE designs for a concrete garden bench.
- Provide the preferred design of the concrete garden bench you are going to make with dimensions.
- Compile a cutting list for the formwork.

Use the following specifications:

- The concrete garden bench must consist of a concrete slab for the seating.
- The concrete slab should rest on TWO concrete legs.
- Reinforcement for the concrete slab and legs must be added for strength.
- Formwork must be made for the seating slab and legs.
- The learner has the option to add additives to the concrete mixture for aesthetical purposes.
- Learners should be innovative and creative regarding the addition of patterns in the concrete slab and legs.
- Finish off the model and present for assessment.

NOTE: Evidence of the research, drawings, cutting list as well as the model itself should be available for moderation.

3.5 Marking guidelines for Phase 2

ASSESSMENT OF THE CONCRETE GARDEN BENCH				
LEARNER'S NAME AND SURNAME: _____				
ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	NOT ATTEMPTED/ POOR	LEARNER MARK
PLANNING	8–10	4–7	0–3	LM
Research on different types of reinforced concrete garden benches				
THREE freehand drawings or instrument drawings of the preferred design showing relevant dimensions				
Compiling of cutting list for the formwork				
TOTAL: 30				
MARKING AND CUTTING OUT OF FORMWORK MEMBERS	8–10	4–7	0–3	LM
Marking and cutting of formwork for the slab of the concrete seat				
Marking and cutting of formwork for the legs				
TOTAL: 20				
ASSEMBLY OF FORMWORK	8–10	4–7	0–3	LM
Marking and drilling of holes for screws to assemble formwork				
Joining formwork members for the slab				
Joining formwork members for the legs				
TOTAL: 30				
REINFORCEMENT	8–10	4–7	0–3	LM
Placing of reinforcement				
TOTAL: 10				
CONCRETE	8–10	4–7	0–3	LM
Mixing of concrete				
Placing and compacting of concrete				
Curing of concrete				
TOTAL: 30				

ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	NOT ATTEMPTED/P OOR	LEARNER MARK
STRIKING OF FORMWORK	8-10	4-7	0-3	LM
Striking of formwork members without damage to concrete				
TOTAL: 10				
FINISHING OF PRODUCT	8-10	4-7	0-3	LM
Finishing of external surface of the concrete				
TOTAL: 10				
FINAL PRODUCT	4-5	2-3	0-1	LM
The garden bench is strong enough to carry one person and fits neatly on its legs				
Neatness and appearance of the final product				
TOTAL: 10				
INNOVATION AND CREATIVITY	4-5	2-3	0-1	LM
The learner added features to improve the appearance and functionality of the garden bench				
TOTAL: 5				
GENERAL ASPECTS	4-5	2-3	0-1	LM
Adherence to deadlines				
TOTAL: 5				
GRAND TOTAL OUT OF 160:				
CONVERTED MARK OUT OF 80:				

3.6 Composite mark sheet for Construction

		PHASE 1			PHASE 2 (MODEL)										TOTAL								
		PART 1 (TERM 1)			PART 2 (TERM 2)			PART 3 (TERM 3)															
NO.	NAMES OF LEARNERS	JOINING OF STEEL BASE PLATE TO CONCRETE BASE.	MODERATED MARK	TOTAL PHASE 1	PLANNING	MARKING OUT AND CUTTING OF FORMWORK	ASSEMBLY OF FORMWORK	REINFORCEMENT	CONCRETE	STRIKING OF FORMWORK	FINISHING OF PRODUCT	FINAL PRODUCT	INNOVATION AND CREATIVITY	GENERAL ASPECTS	GRAND TOTAL	MODERATED MARK	CONVERTED MARK	MODERATED MARK	FINAL TOTAL: 100 (PHASE 1 + PHASE 2)	MODERATED MARK			
		20	20	20	30	20	30	10	30	10	10	10	5	5	160	160	80	80	100	100			
1.																							
2.																							
3.																							
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							
		TOTAL:					TOTAL:																

Signature (Teacher)

Date

Signature (Moderator)

Date



SECTION 4

4. OTHER RELEVANT INFORMATION

4.1 Absence/Non-submission of task

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 should be presented by the candidate for assessment and moderation:

- Phase 1: Mark sheet with evidence
- Phase 2: Evidence of planning 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 teacher supervision.

NOTE: The learners should start with the model at the beginning of Term 1 and complete it by the end of **September**. The teacher should properly plan and manage the available resources so that all learners will be busy with some part of the tasks throughout the year.

4.4 Declaration of Authenticity

NAME OF THE 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 (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

SECTION 5**5. CONCLUSION**

On completion of the practical assessment task learners should be able to demonstrate their understanding of the 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.