



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

CIVIL TECHNOLOGY (CONSTRUCTION)

GUIDELINES FOR PRACTICAL ASSESSMENT TASKS

GRADE 12

2020

These guidelines consist of 13 pages.

TABLE OF CONTENTS

	PAGE
SECTION 1	
1. INTRODUCTION	3
SECTION 2	
2. GUIDELINES FOR THE TEACHER	3
2.1 The structure of the PAT for Civil Technology	3
2.2 Management of the PAT	3
2.3 Administration of the PAT	4
2.4 Assessment and moderation of the PAT	4
2.5 Assessment	4
2.6 Moderation	4
SECTION 3	
3. GUIDELINES FOR THE LEARNER	5
CONSTRUCTION TASKS	5
3.1 Instructions to the learner	5
3.2 Phase 1: Brickwork	6
3.3 Marking guidelines for brickwork	6
3.4 Phase 2: Bird bath with pedestal and column	7
3.5 Marking guidelines for bird bath	8
3.6 Composite mark sheet	10
SECTION 4	
4. OTHER RELEVANT INFORMATION	11
4.1 Absence/Non-submission of task	11
4.2 Requirements for presentation	11
4.3 Recommended time frames	11
4.4 Declaration of authenticity	12
SECTION 5	
5. CONCLUSION	13

SECTION 1

1. INTRODUCTION

The 17 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
- **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 resultated 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 **31 August 2020**.

- (a) All the phases of the PAT should be completed and presented for assessment by the end of **August 2020** 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 moderation of the PAT 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 with the assessment criteria to the learners not later than the **first week in February**.

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 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 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 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 on the learner to explain the function and working principles 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**

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	Brickwork
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

Learner's name: _____

Time Allowed: 1st to 3rd term

3.1 Instructions to the learner

- This practical assessment task 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: Brickwork**Term: 1****Duration of phase 1: 2 hours per learner****Mark allocation: 20 marks**

Task: Dry packing a one-and-a-half brick pier into a one-brick wall built in stretcher bond. The wall and pier should be FIVE courses high.

Instructions:

- Measure and mark out the outline of the wall and the attached pier on the floor using appropriate tools.
- Dry pack the bricks of a one-and-a-half brick pier attached to a one brick wall in stretcher bond.

3.3 Marking guidelines for phase 1

DRY PACKING A ONE-AND-A-HALF BRICK PIER OF A ONE-BRICK WALL BUILT IN STRETCHER BOND					
LEARNER'S NAME AND SURNAME: _____					
NO.	ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	POOR/ NOT ATTEMPTED	LEARNER MARK
		4–5	2–3	0–1	LM
1.1	Measure and mark the outline of the pier on the floor of the workshop using chalk line, builder's square and straight edge.				
1.2	First course of one-brick wall with a one-and-a-half brick pier correctly packed.				
1.3	Second course of one-brick wall with a one-and-a-half brick pier correctly packed				
1.4	Wall is FIVE courses high and bond of every consecutive course is correct				
1.5	Pier is FIVE courses high and bond of every consecutive course is correct				
1.6	The wall is straight and plumb. (Test using builder's square and spirit level.)				
1.7	Pier is plumb. (Test using builder's square and spirit level.)				
1.8	The wall and pier are square to one another. (Test using builder's square.)				
	TOTAL MARKS OUT OF 40				
	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: Bird bath with a column and a pedestal

Terms 1, 2 and 3

Duration: 20 hours

Task:

You are required to design and make a bird bath with a column and a pedestal.

Instructions:

- Research different types of designs of bird baths with columns and pedestals. The bird bath, column and pedestal should be made of reinforced concrete.
- Draw **(can be freehand or with instruments)** at least THREE designs for a bird bath with a column and a pedestal.
- Provide the final design with dimensions of the bird bath with a column and a pedestal you are going to make.
- Compile a schedule to show the stages and time frames for the making of the bird bath with a column and a pedestal.

Use the following specifications:

- The pedestal should be wide and stable enough to balance the column and the bird bath.
- Use appropriate joining agents to join the formwork.
- Provision must be made for easy dismantling (striking of the formwork).
- Choose whether the model will consist of TWO or THREE parts.
- Use form oil as releasing agent on the inside of the formwork.
- The learner has options to add additives to the concrete mixture for aesthetical purposes.
- Learners should be innovative and creative regarding patterns in the concrete on the outside of the birdbath.
- Finish off the model and present for assessment.

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

3.5 Marking guidelines for phase 2

ASSESSMENT OF THE BIRD BATH WITH A COLUMN AND A PEDESTAL				
LEARNER'S NAME AND SURNAME: _____				
ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	POOR/NOT ATTEMPTED	LEARNER'S MARK
PLANNING	8–10	4–7	0–3	LM
Evidence of research, drawings and dimensions on the preferred design				
Schedule to show the stages and time frames				
TOTAL: 20				
MARKING AND CUTTING OUT OF FORMWORK MEMBERS	8–10	4–7	0–3	LM
Marking and cutting of formwork for the bird bath				
Marking and cutting of formwork for sides and bottom of column				
Marking and cutting of formwork for pedestal of the bird bath				
TOTAL: 30				
ASSEMBLY OF FORMWORK	8–10	4–7	0–3	LM
Marking and drilling of holes for screws to assemble formwork				
Joining of members of bird bath				
Joining of members of the column				
Joining of members of the pedestal				
TOTAL: 40				
REINFORCEMENT	8–10	4–7	0–3	LM
Placing of reinforcement				
TOTAL: 10				
CONCRETE	8–10	4–7	0–3	LM
Correct mixing proportions and mixing procedures				
Placing, compacting and curing of concrete				
TOTAL: 20				

ASSESSMENT CRITERIA	GOOD/ EXCELLENT	AVERAGE	POOR/NOT ATTEMPTED	LEARNER'S 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 bird bath does not leak, fits neatly on column and pedestal				
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 bird bath				
TOTAL: 5				
GENERAL ASPECTS	4–5	2–3	0–1	LM
Adherence to deadlines				
TOTAL: 5				
TOTAL MARK OUT OF 160:				
CONVERTED MARK OUT OF 80:				

3.6 Composite mark sheet for Construction PAT

NO.	NAMES OF LEARNERS	PHASE 1			PHASE 2 (MODEL)										TOTAL					
		PART 1 (TERM 1)			PART 2 (TERM 2)					PART 3 (TERM 3)										
		BRICKWORK	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	TOTAL PHASE 2	MODERATED MARK	CONVERTED TOTAL PHASE 2	MODERATED MARK PHASE 2	GRAND TOTAL PHASE 1 AND PHASE 2	MODERATED MARK
		20	20	20	20	30	40	10	20	10	10	10	5	5	160	160	80	80	100	100
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
		TOTAL:				TOTAL:														

Signature of (Teacher)_____
Date_____
Signature of (Moderator)_____
Date

SCHOOL STAMP

SECTION 4

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

The absence of a practical assessment task 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: Brickwork with mark sheet
- 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
- Phase 2 (part 1) (research, sketches, cutting list)

Term 2:

- Phase 2 (part 2) (making of formwork and reinforcement)

Term 3:

- Phase 2 (part 3) (casting of concrete, striking of formwork, finishing of product)

The product/model to be manufactured in the workshop under teacher supervision.

- Declaration of authenticity

NOTE: The learners should start with the model at the beginning of term 1 and complete it by the end of August. 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:

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 (SUBMITTED)

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