Province of the
EASTERN CAPE
EDUCATION

Iphondo leMpuma Kapa: Isebe leMfundo
Provinsie van die Oos Kaap: Department van Onderwys
Porafensie Ya Kapa Botjahabela: Lefapha la Thuto

TECHNOLOGY GRADE 9 JUNE 2025

Marking Guide

SECTION A		**SECTION B**		**SECTION C**	
DESIGN SKILLS		TECHNOLOGY CONCEPTS AND KNOWLEDGE		THE IMPACT OF TECHNOLOGY ON THE ENVIRONMENT	
QUESTION 1	50	QUESTION 3	30	QUESTION 4	20
QUESTION 2					

SECTION A

QUESTION 1

1.1.1 D
1.1.2 D
1.1.3 D
1.1.4 C
1.1.5 A
1.1.6 C
1.1.7 B
1.1.8 B
1.1.9 C
1.1.10 C 10x1=10

1.2.1 I am going to build a staircase and a wheelchair ramp on both sides of the stage. 2
1.2.2 The stage of the hall is not accessible because it is higher than the rest of the hall. 2
1.2.3

Skills	Description	Marks Allocated
Free hand sketches (maximum = 9 marks for the entire question)	It is evident from the sketch that it is a solution to the problem identified. Include stairs and ramp	(4)
	The view is complete and neatly drawn.	(3)
	All dimensions written in correct places.	(2)

Concrete	Wood
1. It is hard and rigid 2. It is durable. 3. Resistant to moisture	Can bend a little. Durable. Affected by moisture.

Any 4 (4)

(any 2)

1.2.4 Ramps should be as shallow as possible.
There should always be steps with the ramp where the rise of the ramp more than 300mm.
The ramp should have handrails.
There should be a clear space around the wheelchair.

R70 x 9 bags = R630

R300 x 1,5 = R450

R350 x1 = R350

R2.50 x200 = R500

TOTAL R 1930

1.3

1.3.1 a) 8
b) 7
c) B
d) A
e) A

1.3.2 at 45°

QUESTION 2

2.1 Length =60mm x 50

4000mm (2)

height = 30mm x 50

1500 mm (2)

2.2 Protractor

Set square (2)

2.3 Scaling up refers to the process of drawing a small objects so that is appears to big and the details can be clearly seen.

e.g. an animal/plant cell.

QUESTION 3

3.1 The force will be multiplied 100N ✓ [1]

3.1.1 It will move a distance of 4cm ✓✓ [2]

3.1.2 It will be 3ml ✓✓ [2]

3.1.3 The air inside the system creates gaps between the fluids, resulting in stiffness of controls lessening. ✓

3.1.4 Air creates sponginess and non-responsiveness ✓ [2]

3.1.5

INPUT	PROCESS	OUTPUT
Person pushes and pulls the handle of the jack up and down.	The hydraulic fluid is forced past the one way valve and moves the output piston.	The jack lifts the car or the load

3.2.1 Gear B. √ (1)

3.2.2 Gear A is the one that is connected to a motor so it has to be the first one to move √ (1)

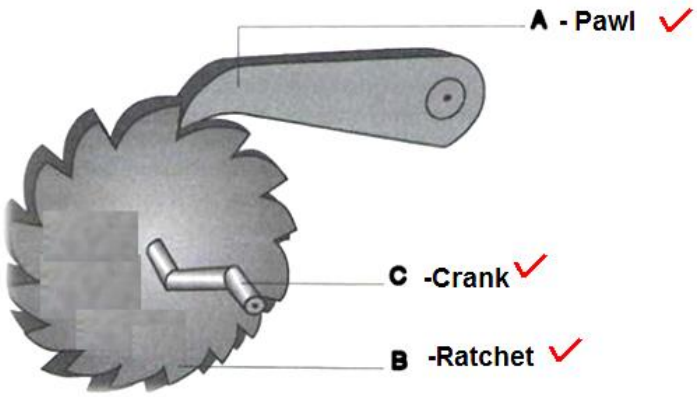
3.2.3 Anticlockwise √ (1)

3.2.4 Velocity ratio $= \frac{\text{No. of teeth on driven gear}}{\text{No. of teeth on driver gear}}$

$= \frac{20}{40}$ √

= 1 : 2 √ (2)

3.3



(1)

3.3.2

To turn the ratchet axle. √ (1)

3.3.3 Car seat belts, mechanical jack, turnstiles in shops, a winch in a water well, etc. ✓ (1 mark for a correct answer) (Any 1 x 1)

3.4

Force needed to lift the load = $\frac{\text{Load}}{\text{Number of pulleys}}$ (1)

$\frac{40}{4}$ (1)

= 10 N (1)

3.5

	Truck A	Truck B	Truck C
Type of load	Static	Static	dynamic
Distribution	even	uneven	even
Force exerted	compression	compression	compression

(9)

SECTION C

QUESTION 4

4.1 Dumpsite /landfill

(2)

4.2 I am going to organise different containers marked with different materals.

(2)

4.3 Glass

Cardbox

Plastic

Paper

Metal any 4 (4)

4.4 Re- use involves using an item again for a similar purpose. (1)

e.g using a peanut butter bottle for storing jam/ using a plastic shopping bag several times instead of buying one everytime you go shopping. (1)

Recycling involves breaking down materials and converting then into new products. (1)

e.g cool drink cans that are broken down, pressed an used to make new cans, window frames tubing and electronics. (1)

4.5 Saves raw materials . (2)

Keeps the environment clean and safe. (2)

4.6 They breathe clean air that is not polluted with smoke.

They are free from the danger of uncontrollable fires.

They can earn something from recycling.

Any 2 x2 (4)

GRAND TOTAL 100