Natural Sciences and Technology · Grade 6

Memorandum · Term 1

TOTAL
51
MARKS

Marking guidelines

1. Award the full mark for a correct answer, even if the learner words it differently.
2. Accept any scientifically correct answer, including one not given in the memorandum.
3. Where a question asks for two or more items, award one mark per correct item.
4. For diagrams, award the mark if the label points at the correct part, even with a spelling error.
5. Do not deduct marks for spelling unless the word takes on a different scientific meaning.

Question	Answer	Marks	Marking note
QUESTION 1 · Multiple choice · 4 marks			
1.1	a. Carbon dioxide	**1**	
1.2	b. Producer	**1**	
1.3	c. Decomposers	**1**	
1.4	a. Carbohydrates	**1**	
QUESTION 2 · Matching · 4 marks			
2.1	1 = E (photosynthesis); 2 = D (herbivore); 3 = B (ecosystem); 4 = C (protein)	**4**	*1 mark each.*
QUESTION 3 · Short questions · 2 marks			
3.1	Water, air, soil, sunlight, rocks, temperature.	**2**	*Any two. 1 mark each.*
QUESTION 4 · Photosynthesis and food webs · 10 marks			
4.1	A = flower; B = leaf; C = stem; D = roots	**4**	*1 mark each.*
4.2	Carbon dioxide + water (in sunlight) → glucose (food) + oxygen	**3**	*1 mark for the inputs, 1 for the outputs, 1 for sunlight as the energy source.*

Question	Answer	Marks	Marking note
4.3	Decomposers break down dead plants and animals and return the nutrients to the soil. Without them dead material would pile up and plants would not get the nutrients they need to grow — then the whole web collapses.	**3**	*1 mark for breaking down, 1 for returning nutrients, 1 for the consequence.*
QUESTION 5 · Ecosystems and adaptations · 9 marks			
5.1	Block 2 = grass or a plant. Block 4 = any carnivore that eats a buck, e.g. lion, cheetah, jackal.	**2**	*1 mark each.*
5.2	The birds eat the locusts. The poison builds up in their bodies and can make them sick or kill them. On top of that there are few locusts left to eat, so the birds lose their food.	**3**	*1 mark for poison through the chain, 1 for the effect on the birds, 1 for the loss of food.*
5.3	Thick fleshy leaves or stem to store water; thorn-like leaves to reduce water loss; long deep roots to reach underground water; a waxy layer on the leaves to reduce water loss; small leaves with little surface area so that less water evaporates.	**4**	*1 mark per adaptation WITH a reason.*
QUESTION 6 · Nutrition and health · 6 marks			
6.1	Carbohydrates = bread, porridge, rice or potatoes; Proteins = meat, fish, eggs or beans; Fat = oil, butter, nuts or avocado	**3**	*1 mark each.*
6.2	Fibre helps food move through the digestive system and prevents constipation. Examples: wholewheat bread, oats, vegetables, fruit or beans.	**3**	*2 marks for the explanation, 1 mark for the example.*
QUESTION 7 · Nutrition, food processing and the starch test · 16 marks			
7.1	Chlorophyll is the green substance in a plant's leaves. It captures sunlight so that the plant can carry out photosynthesis.	**2**	*1 mark for the green substance, 1 for capturing sunlight.*
7.2	a. Thandi — her day has all the groups: grains, fruit and vegetables, protein and dairy. b. Ruan: proteins, vitamins and minerals, and fibre (he eats mostly carbohydrates, fat and sugar, with little fruit, vegetables or protein food). Accept any of these nutrients. c. Swap the cool drink for water and the chips for a fruit; add a vegetable or an egg to supper.	**3**	*1 mark each.*

Question	Answer	Marks	Marking note
7.3	Example: bread, cheese, yoghurt, tinned beans, biltong or tomato sauce. Reasons: to make it last longer; to make it safer; to make it tastier or more convenient; to make it easier to transport.	**2**	*1 mark for the example, 1 mark for the reason.*
7.4	Drying (biltong, dried fruit); freezing (meat, peas); canning or bottling (beans, jam); salting (fish, biltong); sugar (jam); heating and sealing (milk in a box).	**4**	*2 marks per method: 1 for the method, 1 for a suitable food example (2 × 2 = 4).*
7.5	Vitamin C = scurvy; Vitamin D or calcium = rickets (bent bones); Iron = anaemia	**3**	*1 mark each.*
7.6	It shows that there is STARCH in the bread. Iodine changes from brown to blue-black when it mixes with starch, so it is used as a test for starch.	**2**	*1 mark for starch, 1 for the explanation.*

Total **51 marks**



Free quizzes

Finished this test? Keep practising online!

More than 12 000 free questions for Grades 4 to 7, in every subject and aligned to CAPS. After every answer your child gets a short explanation. No registration needed, and it works on a phone.

meerkatskool.co.za

Scan with your phone to start right away

A small request from us

Thank you for supporting MeerkatSkool! We are a small South African business, and every paper is put together with great care.

This test and memo are a free sample: feel free to share them with other parents and teachers. Ask us about the full booklet: meerkatskool.co.za or WhatsApp 066 462 7629.

Thank you!
The MeerkatSkool team

Free quizzes
meerkatskool.co.za

Email
info@meerkatskool.co.za

WhatsApp and calls
066 462 7629

Help us improve

Found a mistake in this test? WhatsApp us straight away. We fix it within 24 hours and send you the new version.

Scan to WhatsApp us · 066 462 7629