



**GRADE 8**  
**TIME: 1 HOUR**

**NATURAL SCIENCES**  
**MEMORANDUM**

**MARCH 2015**  
**MARKS: 50**

**SECTION A**

**QUESTION 1**

1.1.1 D✓

1.1.2 D✓

1.1.3 B✓

1.1.4 D✓

1.1.5 C✓

1.1.6 A✓

**[6]**

1.2.1 photosynthesis✓

1.2.2 mitochondrion✓

1.2.3 trophic levels✓

1.2.4 community✓

1.2.5 malaria✓

**[5]**

1.3.1 C✓

1.3.2 F✓

1.3.3 D✓

1.3.4 G✓

1.3.5 I✓

**[5]**

## QUESTION 2

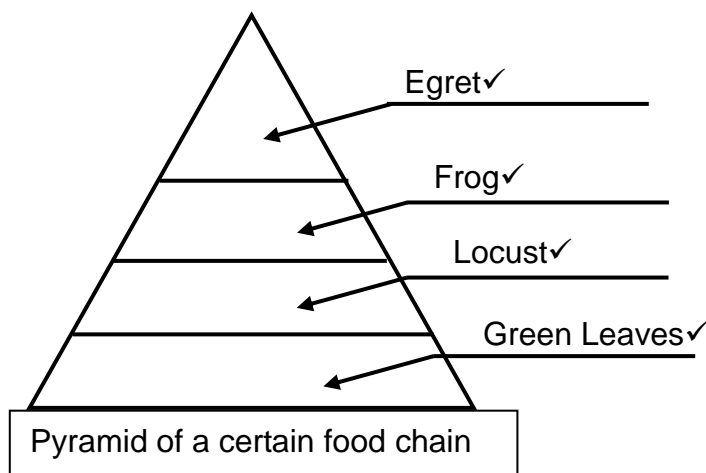
- 2.1 The experiment to determine if sunlight ✓ is necessary for photosynthesis. ✓ (2)
- 2.2 This was done to allow some plants to photosynthesise and the others not. ✓ Thus those that were able to photosynthesise could produce starch ✓ and those that didn't only contained small amounts of starch or no starch. ✓ (3)
- 2.3 The iodine changes from brownish – orange to dark – blue black ✓ which indicated that the leaf or other part of the plant contains starch ✓ and must have photosynthesised. If the iodine solution does not change colour ✓ then the leaf or other part of the plant does not contain starch and did not photosynthesise. ✓ (4)

[9]

## QUESTION 3

- 3.1.1 1✓, 3✓, 4✓, 7✓ Any 2 secondary consumers for 2 marks (2)

3.2.1.



(4)

- 3.2.2. If the secondary consumer (frog) is destroyed, the primary consumers (locusts) will increase in numbers, which may be harmful to the environment ✓. On the other hand, the tertiary consumers (egrets) will be disadvantaged as they will not have enough food ✓. They will die out or will have to go elsewhere for food ✓ (3)
- 3.3 Low temperature: inhibits growth. ✓ Moderate temperature: promote plant growth. ✓ Very high temperature: Dry out soil, causes transpiration rates to increase and leads to much evaporation. This leads to fewer plants. ✓ (3)
- 3.4 Causes water pollution, ✓ causes soil pollution ✓, can cause death of plants and animals ✓ (cows eat plastic bags), can cause veld fires (glass pieces act as lenses), ✓ etc. Name any TWO. Use discretion. (2)

[14]

#### **QUESTION 4**

4.1.1 45✓ Any number between (44-46) (1)

4.1.2 2005,✓ 2008✓ (2)

4.1.3.1 Dependent variable: Number of casualties recorded✓

4.1.3.2 Independent variable: Year (Years)✓ (2)

4.1.4 2011✓ – 100✓ (2)

4.1.5 2008 - 2009✓ 40✓ (2)

4.1.6 Any number between (140 and 180) (✓✓) (2)

**[11]**

**SECTION A = 16**

**SECTION B = 34**

**TOTAL = 50**