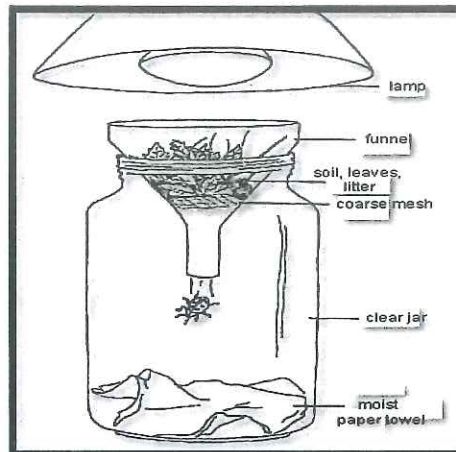


- (e) Given below is a diagram of **Berlese funnel test**. Study the diagram below and answer the following question.



Source: [https://www.amnh.org/learn/biodiversity\\_counts](https://www.amnh.org/learn/biodiversity_counts)

What would happen when **heat** is applied in the experiment?

(1 mark)

### QUESTION 3

(10 marks)

- (a) State why forest are referred to as the '**lungs of the earth**'. (1 mark)
- (b) State **one** symptom of over fertilized pot plants. (1 mark)
- (c) Describe the function of **sand** usage in preparation of a potting mix. (2 marks)
- (d) Explain **one** method of irrigating pot plants. (2 marks)
- (e) Briefly explain **one** way you as a student will maintain lawn in school. (2 marks)

(f) Give **one** reason why ferns adapt well as indoor plants. (1 mark)

(g) Highlight on the importance of regularly **pruning** hedges. (1 mark)

**QUESTION 4** (10 marks)

(a) Differentiate between **deciduous** and **evergreen** plants. (2 marks)

(b) Explain on the importance of having **oxygenated** plants? (2 marks)

(c) State **one amendment** that was endorsed by cabinet in the new 2007 forest policy. (1 mark)

(d) Distinguish between **limbing** and **snedding** processes during logging of trees. (2 marks)

(e) Identify **one** preserving method that is used in your area for breadfruit. (1 mark)

(f) Sticky white latex is one of the by-products of breadfruit tree. Identify **one** usage of this by-product. (1 mark)

(g) Identify **one** method that you as a student can use to plant seedlings or saplings in your agriculture garden. (1 mark)

**QUESTION 5** (10 marks)

(a) Distinguish between **honey bees**, **hornet** and **wasp** in terms of its role in the farm. (3 marks)

(b) Discuss **one** characteristic to be observed when selecting heifers for Breeding programs. (2 marks)

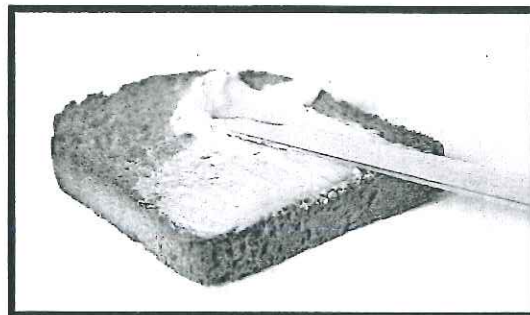
(c) Explain **one** requirement of honey bees. (2 marks)

- (d) State **one** disadvantage of beekeeping in the Pacific. (1 mark)
- (e) Identify **one** characteristic of Italian honey bees. (1 mark)
- (f) State **one** way in which an apiarist would be able to overcome the problem of angry bees. (1 mark)

### QUESTION 6

(10 marks)

- (a) Explain the function of “**hive tool**” used in an apiary? (2 marks)
- (b) Explain how do honeybees control **temperature** in a hive? (2 marks)
- (c) State **one** symptom of bloating in cattle. (1 mark)
- (d) Explain the importance of feeding **colostrums** to calves just after birth. (2 marks)
- (e) What happens during **sticking (bleeding)** stage during slaughter process? (1 mark)
- (f) Why do farmers give sugarcane leaves in terms of **roughage** to cattle as their feed? (1 mark)
- (g) Below is the diagram showing a product of dairy farm.



Source: <https://futurecontent.co>

Name the above dairy product?

(1 mark)

**SECTION C****ESSAY WRITING****[20 marks]**

There are five essay questions in this section. Answer any two questions. Write an essay of approximately 250-300 words to answer each question.

Please note that the allocation of marks for the content has been included for each question and 1 mark is allocated to the structure of the essay. Each question is worth 10 marks.

In this section, you are given an opportunity to show that you can:

- (i) select ideas relevant to the topic,
- (ii) use appropriate examples,
- (iii) communicate information clearly and logically.

**QUESTION 1**

Agriculture and food system have changed very much over the last 50 years.

With reference to the above statement, discuss:

- What is food security. (1 mark)
- Three chronic nutritional deficiencies to food insecurity. (3 marks)
- Three challenges in achieving food security. (3 marks)
- Two risks to food security in your country. (2 marks)

**QUESTION 2**

Every farming business has an objective of maximizing profit.

With reference to the above statement, discuss:

- Three advantages of a farm machine. (3 marks)
- Three factors to consider when choosing small machines. (3 marks)
- Three purpose of carrying out budgeting. (3 marks)

**QUESTION 3**

**Soil contain a dynamic living ecosystem which is made up of organisms, some of which spend their whole life in soil while others spend part of their life cycle in soil.**

With reference to the above statement, discuss:

- Three importance of soil organisms. (3 marks)
- Three requirements of soil organisms to survive and multiply. (3 marks)
- Three husbandry practices that assists in the growth of colonies. (3 marks)

**QUESTION 4**

**Agroforestry is a very old practice that likely grew out of necessity as primitive farmers carved crop land out of forested areas.**

With reference to the above statement, discuss:

- Two economic benefits of agroforestry. (2 marks)
- Three environmental benefits of agroforestry. (3 marks)
- Two disadvantages of agroforestry. (2 marks)
- Two methods of harvesting plantation forests. (2 marks)

**QUESTION 5**

**Despite many systems used, cattle farmers practice various improvement methods to safeguard their animals, farm structures and workers.**

With reference to the above statement, discuss:

- Three husbandry techniques used to improve production. (3 marks)
- Three diseases of adult cattle. (3 marks)
- Three effects of transportation and movement of cattle. (3 marks)

**THE END**