

SECTION A (20 MARKS)

1. An experiment was carried out to investigate changes in the amounts of starch, glucose and protein in a seed as it germinates. The results were plotted as shown in figure 1. Study the figure and answer the questions that follow.

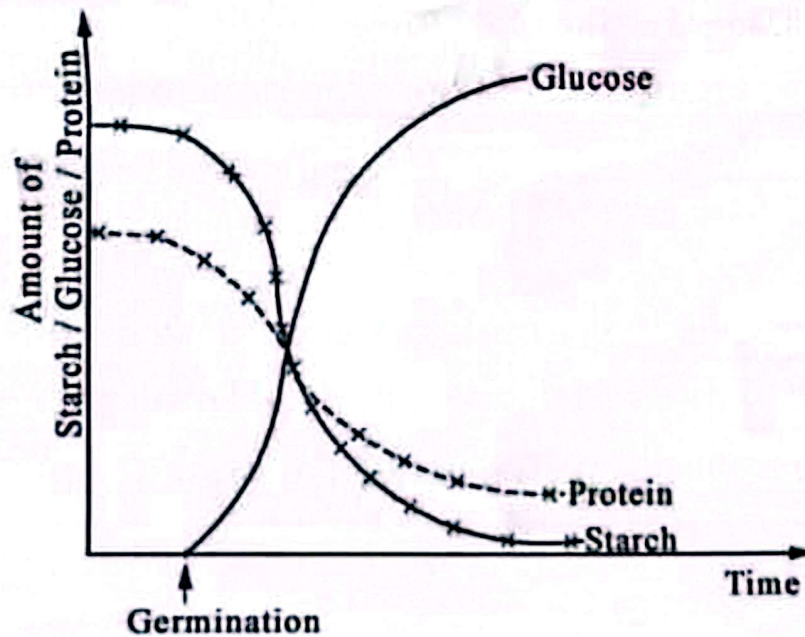


Fig. 1

- Briefly explain how the data used to plot the three curves in figure 1 could have been obtained. (03 marks)
- Describe the changes in the levels of starch and glucose as the seed germinates. (04 marks)
- Explain the changes you have described in 1(b). (06 marks)
- Account for the changes in the amount of protein in the seed as it germinates. (02 marks)
- If at the beginning of the experiment the temperature of the seed germination medium was high, what would happen to the amount of protein, starch and glucose? (03 marks)
- Give reasons for your answer in 1(e). (02 marks)

SECTION B (20 MARKS)

CROP PRODUCTION

Answer one question from this section.

2. (a) Explain the ways in which pests affect crop plants. (10 marks)
- (b) Outline the factors that determine the choice of the method to use to control crop pests. (05 marks)
- (c) State the advantages of using biological agents to control crop pests. (05 marks)
3. (a) Describe the methods of applying inorganic fertilisers. (12 marks)
- (b) Explain the harmful effects of inorganic fertilisers on the environment. (08 marks)

SECTION C (20 MARKS)

ANIMAL PRODUCTION

Answer one question from this section.

4. (a) Explain the factors to be considered when formulating rations for livestock. (12 marks)
- (b) Describe the procedure for mixing feeds to make a ration on a farm locally. (04 marks)
- (c) State the challenges of using locally mixed feeds. (04 marks)
5. (a) Describe the life cycle of a liver fluke. (08 marks)
- (b) State the ways in which the liver fluke is adapted to its parasitic life. (08 marks)
- (c) What are the signs of liver fluke infestation in cattle? (04 marks)

SECTION D (20 MARKS)
AGRICULTURAL ENGINEERING

Answer one question from this section.

6. (a) Describe the qualities of a good house for storing farm tools and equipment. (08 marks)
- (b) Outline the guidelines for storing farm tools and equipment. (08 marks)
- (c) What precautions should be taken when handling farm tools and equipment? (04 marks)
7. (a) Explain why it is important to have buildings on a farm. (02 marks)
- (b) Explain the features of a good deep litter poultry house. (12 marks)
- (c) What are the disadvantages of using a deep litter house to rear poultry? (06 marks)

SECTION E (20 MARKS)
AGRICULTURAL ECONOMICS

Answer one question from this section.

8. (a) Define the term **farm efficiency**. (01 mark)
- (b) Why is it necessary to assess the efficiency of a farm from time to time? (08 marks)
- (c) Describe **three methods** of assessing the efficiency of a poultry enterprise. (06 marks)
- (d) State ways of improving the efficiency of the poultry enterprise. (05 marks)
9. (a) State the possible sources of agricultural credit in Uganda. (03 marks)
- (b) Explain the considerations that money lending institutions make when assessing farmers' applications for credit. (09 marks)
- (c) Suggest reasons for the failure of farmers to repay agricultural credit. (08 marks)