



Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 33

1 Key words**[4]**

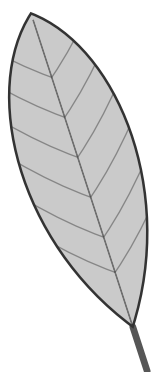
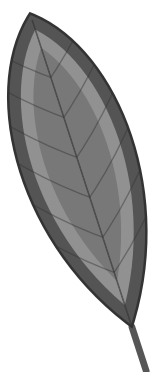
Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

biomagnification essential elements humus Jholmol malathion micronutrients
nitrogenous organic phosphatic primary nutrients

A plant needs 17 _____. Nitrogen, phosphorus and potassium are its _____, needed in the largest amounts. Fertilizer made from the decayed bodies and wastes of plants and animals is _____ fertilizer, and it adds _____ to the soil. Urea is a _____ fertilizer, and DAP is a _____ fertilizer. _____ is a bio-insecticide made in Nepal. DDT builds up at every step of a food chain: this is called _____.

2 Label the diagram**[2]**

The diagram shows leaves of plants grown in different soils. Write which nutrient is lacking for each leaf, 1 to 4. Each carries 0.5 mark.

**1****2****3****4**

1. _____

2. _____

3. _____

4. _____

3 Multiple choice**[5]**

Choose the correct option for each of the following questions.

i. Which of these household materials can make up for a shortage of phosphorus in the soil? **[1]**

a. ash

b. bone powder

c. banana peel

d. a leguminous plant



- ii. Which of these is a group of insecticides only? [1]
a. potassium chloride, aldrin, benzene hexachloride
b. DDT, sodium chloride, aldrin
c. dieldrin, DDT, methoxychlor
d. potassium chloride, aldrin, malathion
- iii. A plant takes its carbon mainly from... [1]
a. the soil, through its roots
b. fertilizer
c. water
d. carbon dioxide in the air, through its leaves
- iv. A maize plant is short, and its older, lower leaves have turned pale yellow all over. The soil most probably lacks... [1]
a. nitrogen
b. phosphorus
c. potassium
d. water
- v. Why should a farmer not wash his insecticide sprayer in the village stream? [1]
a. The sprayer will rust.
b. Insecticides don't dissolve in water.
c. The insecticide will poison the water, the fish in it and the people downstream who use it.
d. The stream will wash the sprayer too clean.

4 Very short answers [3]

Write very short answers to the following questions.

- a. Which three elements does a plant get from air and water? [1]

- b. Which nutrient does wood ash supply to the soil? [1]

- c. A bag of NPK fertilizer says 20-20-10. What do the numbers mean? [1]

5 Short answers [8]

Write short answers to the following questions.

- a. Write any two differences between chemical fertilizer and organic fertilizer. [2]



b. Give a reason: organic fertilizer is environment-friendly. [2]

c. Give a reason: the use of DDT powder upsets the balance of the ecosystem. [2]

d. What is a bio-insecticide? Give two examples. [2]

6 Long answer [4]

Write a long answer to the following question.

A farmer can't decide whether to use chemical fertilizer to increase his harvest. What would you suggest?

7 Fertilizers [5]

Answer the following questions. Show your working in the calculation.

a. Give two examples each of nitrogenous, phosphatic and potassium fertilizers. [3]



- b. A farmer's field needs 46 kg of nitrogen. Urea contains 46% nitrogen. How many kilograms of urea should she use, and how many 50 kg bags is that? [2]

Answer: _____

8 Think [2]

Think, then answer.

Two plants were grown at the same time from the same kind of seed. Plant 1 is short and thin, with pale yellowish-green leaves; plant 2 is tall, with broad, dark green leaves. Give the most likely reason for the difference, and suggest a solution.

9 Activity: Does it dissolve? (Activity 19.2) (not marked)

Put a teaspoon of each fertilizer in a glass of water and stir. Touch each glass. (Wash your hands afterwards, and don't taste them.)

Fertilizer	Does it dissolve?	Quickly or slowly?	Does the glass get colder, warmer or neither?
urea			
DAP			
potash (potassium chloride)			

