

2 0 1 4

BOTANY

( Major )

Paper : 5.4

( Applied Botany )

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. Answer the following as directed : 1×7=7

(a) Name two nitrogen fixing blue-green algae.

(b) Name the algae from which 'algin' is produced.

(c) Brown spot of rice is caused by —.

( Fill in the blank )

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(d) Which one of the following microbes can degrade pesticide?

(i) *Aspergillus flavus*

(ii) *Bacillus papilliae*

(iii) *Salmonella typhi*

(iv) *Bacillus natto*

( Pick up the correct one )

(e) The production of pure lines in cross-pollinated plants is known as \_\_\_\_\_.

( Fill in the blank )

(f) Genetic engineering is also known as \_\_\_\_\_.

( Fill in the blanks )

(g) Cytokinin is a/an \_\_\_\_\_.

(i) natural plant hormone

(ii) artificial plant hormone

(iii) postulated plant hormone

(iv) non-nitrogenous plant hormone

( Pick up the correct one )

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2. Write short notes on the following :  $2 \times 4 = 8$

(a) Irradiation breeding

(b) Biological weathering

(c) Dairy bacteriology

(d) Agar-agar

3. Write explanatory notes on any *three* of the following :  $5 \times 3 = 15$

(a) Grafting

(b) Intergeneric hybrids

(c) Use of microbes in bakery industry

(d) Parthenocarpic fruits

(e) Deforestation

4. Answer the following :

(a) Write an account on the role of hormones in agriculture and horticulture. 10

Or

Write an account on the role of microbes in increasing the fertility of soil.

(b) What is mutation? Mention the role of mutation in crop improvement.  $2 + 8 = 10$

Or

What is mycorrhiza? Discuss its role in plant growth and development.  $2 + 8 = 10$

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(c) Write notes on the following : 5+5=10

(i) Indoor gardening

(ii) Mycotoxins

Or

Write notes on the following : 5+5=10

(i) Algae as medicine

(ii) Bioremediation

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