

2018

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. Fill in the blanks/Answer the following : $1 \times 7 = 7$

- (a) Name the microbe which is responsible for production of commercial ethyl alcohol.
- (b) Write the name of first genetically modified crop introduced in India.
- (c) Name the person who was behind the green revolution concept in India.
- (d) VAM stands for _____.

(2)

- (e) Which State of India has the highest area under shifting cultivation?
- (f) The agar was first extracted from ____.
- (g) Name one growth hormone present in root tips.

2. Answer the following questions : $2 \times 4 = 8$

- (a) Define allergens.
- (b) What is the meaning of polyploidy?
- (c) Write the scientific names of two edible fungi.
- (d) What do you mean by bioremediation?

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

- (a) Role of lichen as pollution indicator
- (b) Write a note on algal-based medicines.
- (c) Elucidate the importance of mycorrhiza in germination.
- (d) Write a note on positive impacts of indoor gardening.
- (e) Is mutation a natural phenomenon? Justify your answer.

(3)

4. Answer any *three* of the following questions :

$10 \times 3 = 30$

- (a) What do you mean by 'soil fertility'? Write a note on the role of algae in improving of soil fertility citing suitable examples.
- (b) Note down the different reasons of deforestation. Write about its impact on the climate of North-East India.
- (c) "Breeding can be a useful tool for disease resistance in crops." Justify your answer.
- (d) Define mycotoxins. Give a few suitable examples of organisms producing mycotoxins. How does it affect human health?
- (e) Discuss the importance of plant growth regulators in agriculture.

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