

D-6645

M.Sc. (IVth Semester) Examination, 2020 BOTANY

(Agricultural Ecology : Principles & Applications)

Time Allowed : Three Hours

Maximum Marks : 70

SECTION - A

Note : Attempt any ten questions. Each question carries
one mark. **1×10=10**

Q. 1. Objective Type :

Question no. (1-5) Fill in the blanks type :

(i) Example of a N - based fertilizer is _____.

(ii) Example of GMO is _____.

(iii) Example of a plant virus _____.

(2)

(iv) Example of a macronutrient is _____.

(v) Example of a micronutrient is _____.

Question no. (6-12) Multiple choice type :

(vi) Cover crops are used as :

(a) Green manure

(b) Manage soil macro and micronutrients

(c) Arrest soil erosion

(d) All of the above

(vii) The unit to measure salinity is :

(a) Dobson

(b) Seimens

(c) PSU

(d) Dimensionless

(3)

(viii) Which of the below is an example of

Sustainable Agricultural Practice ?

- (a) Integrated Pest Management
- (b) Crop - rotation
- (c) Green manuring
- (d) All of the above

(ix) Example of an obnoxious weed is :

- (a) Sorghum halepense (L.)
- (b) Striga sp
- (c) Parthenium hysterophorus
- (d) All of the above

(x) Which of this is a major pest of rice ?

- (a) Hieroglyphus banian
- (b) Dicladispa armigera
- (c) Scirpophaga incertulas
- (d) All of the above

(4)

(xi) Example of beneficial soil organisms :

- (a) Mites
- (b) Nematodes
- (c) Earthworms
- (d) All of the above

(xii) Mulching of top-soil facilitates in :

- (a) Protection from soil erosion
- (b) Prevents excess run-off
- (c) Conservation of soil moisture
- (d) All of the above.

SECTION - B

Note : Attempt any five questions. Each question carries
2 marks. **5×2=10**

Q. 2. Very Short Answer Type (25-30 words) :

- (i) Name two cover crops.

(5)

- (ii) What are the different types of mulching ?
- (iii) Name two beneficial soil organisms.
- (iv) What is agroecology ?
- (v) Name two obnoxious weeds found commonly in Indian agricultural fields.
- (vi) Which environmental factors influence soil characteristics ?

SECTION - C

Note : Attempt any five questions. Each question carries 4 marks. **5×4=20**

Q. 3. Short Answer Type (250 words) :

- (i) Write a brief note on cropping system practiced in India.
- (ii) Write a short note on soil macronutrients.

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(6)

- (iii) Write a short note on conservation tillage.
- (iv) Define GMOs with proper examples.
- (v) How to manage weeds in agricultural feeds ?
- (vi) What is agro-biodiversity ? Explain briefly with examples.
- (vii) Write a note on intercropping.

SECTION - D

Note : Attempt any three questions. Each question carries 10 marks. **3×10=30**

Q. 4. Essay Type (more than 500 words) :

- (i) Discuss the role of Nitrogen in agroecosystems.
- (ii) Write with proper examples on the issue of intergrated pest management.

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(7)

(iii) Discuss on the future perspectives of agroecology.

(iv) Discuss on traditional knowledge systems and agrodiversity management.

