

2021
SERICULTURE
[MAJOR]
Paper : III

Full Marks : 100

Time : 4 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP-A****(Soil Science & Biology of Mulberry)****(Marks : 50)**

1. Answer any **two** of the following: $1 \times 2 = 2$
 - a) What is spacing?
 - b) What is layering?
 - c) Which species is used for production of VAM?
 - d) What do you mean by soil porosity?
2. Answer any **five** of the following: $2 \times 5 = 10$
 - a) Name two popular mulberry varieties each for Karnataka and West Bengal.

- b) Briefly point out the deficiency symptoms of K in mulberry.
 - c) Write two major toxicity symptoms for nitrogen in plants.
 - d) Write the differences between soil texture and soil structure.
 - e) What is mixed crop?
 - f) What is soil sampling?
 - g) Mention the soil characters suitable for mulberry plantation.
3. Answer any **three** of the following: $6 \times 3 = 18$
 - a) What is planting system? Write advantages and limitations of recommended planting system of mulberry? $1 + 2 \frac{1}{2} + 2 \frac{1}{2}$
 - b) What do you mean by soil air? Write short notes on bulk density and particle density. $2 + 2 + 2$
 - c) Write short notes on Black soil and Lateritic soil. $3 + 3$
 - d) Write briefly about recommended fertilizer schedule for rainfed and irrigated mulberry garden in West Bengal. $3 + 3$
 - e) Write short notes on Alluvial soil and Red soil. $3 + 3$

f) What do you mean by soil water? Write a short note on physical and biological classification of soil water. $1+2\frac{1}{2}+2\frac{1}{2}$

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

$10\times 2=20$

a) Define weeds. Name the common weeds of mulberry garden. How weeds effect on mulberry plants? What are the recommended control measures of weeds in mulberry garden? $1+3+3+3$

b) Write the available measures for soil water conservation. What do you mean by CEC? Describe the roles of soil microorganisms in soil. $4+1+5$

c) Why nursery is important for propagation of mulberry? Briefly describe the preparation of nursery bed mentioning lay-out, size, soil composition, irrigation, drainage and nutrient supply. $2+(1+1+2+1+1+2)$

d) What is soil structure? Describe the types and importance of soil structure. Write on the available measures to improve soil structure. $1+(2+3)+4$

GROUP-B

(Diseases and Pests of Mulberry & Silkworm)

(Marks : 50)

5. Answer any **two** of the following: $1\times 2=2$

a) Indicate the causal organism of Root knot mulberry.

b) Name a predator of Mealy bug in mulberry.

c) Name a bed disinfectant used during rearing of silkworm.

d) What is pesticide?

6. Answer any **five** of the following: $2\times 5=10$

a) What are the different types of leaf spot in mulberry?

b) Indicate two insecticides used in mulberry crop protection.

c) Name two bed disinfectants used during rearing of silkworm larva.

d) Indicate two fungal diseases of mulberry.

e) What are essential components of IPM?

f) Name the pathogen causing white muscardine disease in silkworm, *B. mori*. Indicate its season of occurrence in eastern India.

g) Name the pathogen causing powdery Mildew in mulberry indicating the season of occurrence.

7. Answer any **three** of the following: $6 \times 3 = 18$

- a) Write a note on 'Tukra' in mulberry.
- b) Write down a brief note on the diseases of mulberry based on the groups of organisms.
- c) Write a brief note on powdery mildew disease in mulberry.
- d) What do you mean by natural enemies? Indicate the role of natural enemies for management of mulberry pests.
- e) Give a brief outline of mulberry diseases according to group of pathogens.

8. Answer any **two** of the following: $10 \times 2 = 20$

- a) Write notes on:
 - i) Leaf blight in mulberry
 - ii) Aspergillosis in silkworm
- b) Write down the biology of Uzi fly indicating its occurrence in eastern India. Add a note on physical control measures.

c) Indicate the pathogen causing pebrine disease in silkworm, *B. mori*. Describe the life cycle of the pathogen with a sketch. Indicate its control measures.

d) Write on the role of environmental factors and nutrition on the incidence of diseases in silkworm, *B. mori*.
