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(NEP—2020)

(1st Semester)

BOTANY (MAJOR/MINOR)

(Economic Botany)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(*Marks* : 10)

Tick (✓) the correct answer in the brackets provided :　　　　　　　　1×10=10

1. According to Vavilov, which region is the center of origin for rice?

    (a) East Asian Center　　　(　)

    (b) Ethiopian Center　　　(　)

    (c) Mediterranean Center　　　(　)

    (d) Indian Center　　　(　)

2. Which of the following processes is used to stabilize the latex from the Para rubber tree to form natural rubber?

    (a) Vulcanization　　　(　)　　　(b) Distillation　　　(　)

    (c) Fermentation　　　(　)　　　(d) Polymerization　　　(　)

3. Which part of the rice grain is removed during the milling process to produce white rice?

    (a) Bran and germ　　　(　)　　　(b) Endosperm　　　(　)

    (c) Husk　　　(　)　　　(d) Whole grain　　　(　)

4. French beans are a good source of which vitamin?

(a) Vitamin D ( )   (b) Vitamin C ( )

(c) Vitamin B$_{12}$ ( )   (d) Vitamin K ( )

5. The botanical name of sal, a timber-yielding plant, is

(a) *Tectona grandis* ( )   (b) *Shorea robusta* ( )

(c) *Azadirachta indica* ( )   (d) *Elaeis guineensis* ( )

6. Golden fibre refers to

(a) tea ( )   (b) cotton ( )

(c) jute ( )   (d) sal ( )

7. The roots of *Elaeagnus latifolia* are commonly used in traditional medicine for which of the following purposes?

(a) Treating skin infections ( )

(b) Managing diabetes ( )

(c) Menstrual problems ( )

(d) Reducing fever ( )

8. Cotton fibre is obtained from

(a) seeds ( )   (b) roots ( )

(c) stems ( )   (d) leaves ( )

9. Quinine is an antimalarial drug obtained from

(a) *Digitalis* sp. ( )   (b) *Ephedra* sp. ( )

(c) *Dioscorea* sp. ( )   (d) *Cinchona* sp. ( )

10. Alkaloids like morphine and codeine are found in

(a) *Rauwolfia serpentina* ( )

(b) *Papaver somniferum* ( )

(c) *Claviceps purpurea* ( )

(d) *Piper cubeba* ( )

(SECTION : B—SHORT ANSWERS)

(Marks : 15)

Write short notes on *five* questions, taking at least *one* from each Unit :   3×5=15

UNIT—I

1. Ancient economic botany

2. Vavilov's centre of origin

UNIT—II

3. Uses of Para rubber

4. Scientific name of winged bean and its uses

UNIT—III

5. Botanical name, family and part used of groundnut

6. Botanical name, family and part used of teak

UNIT—IV

7. Medicinal use of *Cinchona* species

8. Broad-spectrum antibiotics

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer *five* questions, taking at least *one* from each Unit :   10×5=50

UNIT—I

1. Explain the significance of germplasm augmentation and its conservation in enhancing agricultural biodiversity.   10

2. Define plant quarantine. Discuss the inspection procedures and their importance in detecting and preventing the spread of plant pathogens and pests.   2+8=10

UNIT—II

3. Describe the morphological characters of rice and its economic importance.

5+5=10

4. Describe the stages involved in sugarcane processing and mention its by-product.

10

UNIT—III

5. Describe the economic importances of the following plants mentioning their botanical names and families :

5+5=10

(a) Turmeric and ginger

(b) Tea and coffee

6. Write short notes on the following mentioning their botanical names, families and uses :

5+5=10

(a) Cotton and jute

(b) Pigeon pea and mustard

UNIT—IV

7. Write short notes on the following :

5+5=10

(a) Drugs obtained from barks

(b) Drugs obtained from leaves

8. Define antibiotics. Describe the different types of antibiotics and the microorganisms from which they are derived.

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