

[This question paper contains 5 printed pages.]

1300

Your Roll No. ....

**B.Sc. (Hons.) / II**

**A**

**BOTANY – Paper V**

**(Economic Botany and Crop Improvement)**

**(Admissions of 2004 and onwards)**

*Time : 3 Hours*

*Maximum Marks : 38*

*(Write your Roll No. on the top immediately  
on receipt of this question paper.)*

*Attempt six questions in all, including  
Q. No. 1 which is compulsory.  
Write botanical names and draw  
diagrams wherever necessary.*

1. Give the botanical name and family for any **eight** of the following :
- (i) A plant which is a source of a non-alcoholic beverage.
  - (ii) A plant yielding both fibers and oil of commercial importance.
  - (iii) A plant containing usable starch in the root tubers.
  - (iv) A spice obtained from a schizocarpic fruit (cremocarp).

P.T.O.

- (v) A plant having roots which can be made into cooling screens and jackets.
  - (vi) A source of oil used as a clearing agent in histological work.
  - (vii) Source of wood for making railway sleepers mainly.
  - (viii) A plant used as a source of oil, having edible young shoots and leaves.
  - (ix) A plant having root bark as the richest source of medicine used for curing a common suffering of tropical countries.
  - (x) The source of gutta-percha. (1×8=8)
2. Differentiate between any **three** of the following :
- (i) Air curing and Flue Curing
  - (ii) Hard wood and Soft wood
  - (iii) Green tea and Black tea
  - (iv) Autogamous Crops and Allogamous Crops
  - (v) Animal fibres and Plant fibers
  - (vi) Drying oil and Non drying oil (2×3=6)
3. Write short notes on any **three** of the following :
- (i) Seasoning of wood

- (ii) Economic importance of legumes
- (iii) Tobacco and its health hazards
- (iv) By-products of sugarcane industry
- (v) Methods of extraction of essential oils

(2×3=6)

4. Draw well labelled diagram of any two of the following :

- (i) T.S. of fennel fruit
- (ii) V.S. of tea leaf
- (iii) L.S. of maize caryopsis
- (iv) T.S. of hesperidium fruit

(3×2=6)

5. Define any six of the following terms :

- (i) Hydrogenation
- (ii) Puredine selection
- (iii) Mobilization
- (iv) Lancing
- (v) Narcotic
- (vi) Floriculture
- (vii) Retting
- (viii) Millets

(1×6=6)

P.T.O.

6. Write explanatory notes on any two of the following :

- (i) Vavilov centres of diversity and their significance
- (ii) Papain extraction and its uses
- (iii) Significance of Biosafety considerations in crop improvement using biotechnology
- (iv) Two important Indian medicinal plants

(3×2=6)

7. (a) Give two principal states of India where any four of the following crops are cultivated extensively.

- (i) Coffee
- (ii) Mango
- (iii) Tobacco
- (iv) Sandal wood
- (v) Rubber
- (vi) Black pepper

(1×4=4)

(b) Expand any two of the following acronyms :

- (i) CCRI
- (ii) NBPGR
- (iii) CIMAP
- (iv) RRIM

(1×2=2)

8. Comment on any four of the following statements :

- (i) The role of traditional knowledge in the study of economically important plants.
- (ii) *Cannabis* is a multipurpose plant.
- (iii) Botanical gardens have played an important role in the spread/distribution of economically important plants.
- (iv) Vegetables form an essential component of a balanced diet.
- (v) Par boiling improves the texture and nutritional value of rice.
- (vi) Use of natural insecticides is eco-friendly.

(1½×4=6)