

09/6/25

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 5305

J

Unique Paper Code : 2164001204

Name of the Paper : Ethnobotany

Name of the Course : Botany

Semester : II

Duration : 2 Hours

Maximum Marks : 60



Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **four** questions. **All** questions carry equal marks.
3. Question 1 is compulsory.
4. Attempt **all** parts of a question together.

1. (a) Define the following (**any five**) : (1×5=5)

- (i) Traditional Medicine
- (ii) Biopiracy
- (iii) Ethnoveterinary
- (iv) Herbarium
- (v) Intoxicants
- (vi) Pharmaceutical

(b) Match the following : (1×5=5)

- | | |
|-------------------------|---------------------------------|
| (i) Winter cherry | a. Bio piracy |
| (ii) Neem | b. Indian Tribes |
| (iii) Pashmina | c. Used to flatten a dry plants |
| (iv) Gonds and Santhals | d. geographical indication |
| (v) Plant Press | e. Ashwagandha |

P.T.O.

- (c) Fill in the blanks : (1×5=5)
- (i) Herbarium helps in _____ and classification of plants.
 - (ii) _____ is an initiative to protect traditional knowledge.
 - (iii) _____ is the scientific name of Tulsi.
 - (iv) _____ is a traditional intoxicant made from Cannabis.
 - (v) _____ are drugs that dull pain and induce sleep.
2. (a) Write down the role of field work and herbarium in Ethanobotanical studies. (7.5)
- (b) How can Ethanobotanical data be used for sustainable resource management. (7.5)
3. (a) What are narcotic plants? Mention their beneficial and harmful effects. (5)
- (b) Write the botanical name, family, important plant part and traditional uses of the following (**any two**) (2×5=10)
- (i) Neem
 - (ii) Matura tea
 - (iii) Nirgundi
 - (iv) Puncture vine
4. (a) How do archeological findings compare to Ethanobotanical knowledge from living communities. (7.5)
- (b) Explain how Ethanopharmacology be used to protect biodiversity and Traditional knowledge. (7.5)
5. (a) Mention some challenges that encountered while practicing folk magic. (7.5)
- (b) Describe how the belief systems and ecological wisdom of ethnic groups support conservation of plant species in their native regions. (7.5)

June 2025

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Your Roll No.....

Sr. No. of Question Paper : 5773

J

Unique Paper Code : 2162011201

Name of the Paper : Microbiology and Plant – Microbe Interactions

Name of the Course : B.Sc. (Hons.) Botany

Semester : II

Duration : 2 Hours

Maximum Marks : 60



Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **four** questions in all.
3. Question No. 1 is compulsory.
4. Attempt **all** parts of a question together.

1. (a) Define the following : (**any five**) (5×1=5)

- (i) Proteobacteria
- (ii) Firmicutes
- (iii) Viroid
- (iv) Bacteriorhodopsin
- (v) Biofilm
- (vi) Plasmid
- (vii) Phytoplasma

(b) Match the following : (5×1=5)

- | | |
|------------------------------|--------------------------------|
| (i) <i>Bacillus</i> sp. | a. Taq polymerase |
| (ii) <i>Rhizobium</i> | b. Rod-shaped bacterium |
| (iii) <i>Mycoplasma</i> | c. Symbiotic nitrogen fixation |
| (iv) T1 phage | d. Wall-less form |
| (v) <i>Thermus aquaticus</i> | e. DNA virus |

P.T.O.

- (c) Write true or false against the given statements : (5×1=5)
- (i) Angular leaf spot of cotton is caused by *Xanthomonas citri* pv. *malvacearum*.
 - (ii) Tobacco mosaic virus is a ds DNA virus.
 - (iii) Mycorrhiza is an association between a fungi and the roots of higher plants.
 - (iv) Louis Pasteur discovered the Koch's postulates.
 - (v) *Aquaspirillum magnetotacticum* perceives magnetism.
2. Differentiate between : (any three) (3×5=15)
- (a) Prototrophs and Auxotrophs
 - (b) F+ and Hfr strains
 - (c) Archaeobacteria and Eubacteria
 - (d) Spheroplasts and Protoplast
 - (e) Gram-positive and Gram-negative cell wall
3. Write short notes on the following : (any three) (3×5=15)
- (a) Generalized transduction
 - (b) Economic importance of viruses
 - (c) Plant growth promoting rhizobacteria
 - (d) Citrus canker disease
 - (e) Endomycorrhiza
4. Draw well labelled diagrams of any three of the following : (3×5=15)
- (a) Bacterial cell structure
 - (b) T2 Bacteriophage
 - (c) Lysogenic cycle
 - (d) T.S. of root nodule
5. Answer the following : (any two) (2×7.5=15)
- (a) Explain genetic transformation in bacteria. What is the transformation frequency reported for Eubacteria?
 - (b) What are the types of mycorrhiza and mention their effects on plant growth.
 - (c) Give a detailed account of any one viral disease of plants.

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Your Roll No.....

Sr. No. of Question Paper : 5794

J

Unique Paper Code : 2162011202

Name of the Paper : Plant Resources and Economic Botany

Name of the Course : **B.Sc. (Hons.) Botany**

Semester : II

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four** questions in all including Question Number 1 which is compulsory.
3. **All** parts of a question must be answered together.
4. **All** questions carry equal marks.
5. Draw labelled diagrams and write the botanical name wherever necessary.

1. (a) Mention the botanical name and family of the following (**any five**) : (1×5=5)

- (i) Black pepper
- (ii) Fennel
- (iii) Tea
- (iv) Soybean
- (v) Flax
- (vi) Groundnut

- (b) Expand the following (**any five**) : (1×5=5)

- (i) IARI
- (ii) CDRI
- (iii) IRRI
- (iv) SBI
- (v) NBPGR
- (vi) CPRI

P.T.O.

- (c) Match the following (**any five**) : (1×5=5)
- | | |
|-------------------|---------------|
| (i) Cotton | (a) Retting |
| (ii) Millet | (b) Ginning |
| (iii) Jute | (c) Saffron |
| (iv) Sugarcane | (d) Ratooning |
| (v) Rice | (e) Ragi |
| (vi) Shahi Zafran | (f) Caryopsis |
2. Differentiate between the following (**any three**) : (5×3=15)
- (i) Fatty oils and essential oils
 - (ii) White jute and tossa jute
 - (iii) Black tea and green tea
 - (iv) Cereals and millets
3. Write short notes on the following (**any three**) : (5×3=15)
- (i) Products and by-products of Sugarcane Industry
 - (ii) Vavilov's concept of centres of cultivated plants
 - (iii) Importance of legumes to man and ecosystem
 - (iv) Curing of tobacco
 - (v) Processing of coffee
4. Draw well-labelled diagrams of the following giving botanical name and family (**any three**) : (5×3=15)
- (i) L.S. of Clove bud
 - (ii) C.S. of Potato tuber
 - (iii) L.S. Wheat grain
 - (iv) T.S. Citrus fruit
5. (i) Coconut is a multi-purpose plant. Comment on the statement. (5)
- (ii) Write botanical name, family, plant part used and chemical constituents of any two drug yielding plants you have studied. (5)
- (iii) Tapping of latex from para rubber tree. (5)

June 9075 ✓

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Your Roll No.....

Sr. No. of Question Paper : 5814

J

Unique Paper Code : 2162011203

Name of the Paper : Plant Systematics

Name of the Course : B.Sc. (H) Botany

Semester : II

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **FOUR** questions in all.
3. Question No. 1 is compulsory.
4. **All** questions carry equal marks.
5. Attempt all parts of a question together.

1. (a) Fill in the blanks : (**any five**) (1×5=5)

- (i) Indian Botanical Garden is situated at _____ city.
- (ii) Father of Botany _____ .
- (iii) *Pinax theatri botanici* is written by _____ taxonomists.
- (iv) *Theorie elementaire de la Botanique*, author of the book _____ .
- (v) Standard size of a herbarium sheet is _____ .
- (vi) Carlous Linnaeus was given the award of _____ .

- (b) Name the following : (1×5=5)

- (i) Name the Authur of *Systema naturae*.
- (ii) Name a plant name with Genus epithet, named after a place
- (iii) Name Basal Angiosperm
- (iv) An angiosperm which lacks vessels
- (v) Publishing year of Binomial nomenclature

- (c) Define the following : (**any five**) (1×5=5)

- (i) Vasculum
- (ii) Out group
- (iii) Manual
- (iv) Monophyly

P.T.O.

- (v) Heterobathmy
- (vi) Taxonomic literature

2. Differentiate between : **(any three)** (5×3=15)
- (a) Homonym, Basionym and Tautonym
 - (b) Natural and Phylogenetic system of Classification
 - (c) Holotype, lectotype and Paratype
 - (d) Phenetic and Cladistic
3. Write short notes on **(any three)** : (5×3=15)
- (a) Herbaceous origin of angiosperms
 - (b) Secondary metabolites in relation to Taxonomy
 - (c) Importance of Herbarium
 - (d) Biological species concept
 - (e) Floras
4. (a) Write a note on Characters and character coding in cladistics methodology. (7)
- (b) Discuss the role of Palynology in relation to Taxonomy with suitable example. (8)
5. (a) What is type method? Give an account of different 'types' mentioned in plant nomenclature. (5)
- (b) What is APG Classification and discuss about the various versions of APG system of classification. (5)
- (c) Interpret the following : (3)
- (i) *X Triticosecale*
 - (ii) *Triticum aestivum* L. 1753
 - (iii) *Rosa floribunda* cv. Blessings
- (d) Write alternate name and type genus of Labiatae and compositae. (2)