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**PGIIS-O 1075 A-18**  
**M.Sc. II<sup>nd</sup> Semester Examination**  
**BOTANY**  
**(Plant Anatomy and Embryology)**  
**Paper : HCT 2.2**  
**(Old)**

**Time : 3 Hours**

**Maximum Marks : 80**

***Instructions to Candidates:***

*Answer any Five questions. Q.No. 1 is compulsory.*

1. Answer all questions in **One** or **Two** sentences. (10×2=20)
- i) Periderm
  - ii) Tylosis
  - iii) Ring porous wood
  - iv) Lenticels
  - v) Endothecium
  - vi) MGU
  - vii) Mesogamy
  - viii) Apoplast
  - ix) Meiocyte
  - x) Free nuclear endosperm
2. Give an account on primary and secondary cell walls. (15)
3. Explain the ontogeny, phylogeny and evolution of phloem. (15)
4. Explain in detail about dermal tissue system. (15)
5. Describe anomalous secondary growth in Nyctanthus. (15)

6. Write short note on any **THREE** of the following :

**(3×5=15)**

- a) Histochemistry of Cambium.
  - b) Tapelum and its function.
  - c) *In vitro* pollination.
  - d) Ultrastructure of typical embryo.
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**PGIIS-N 1079 A-18**  
**M.Sc. II<sup>nd</sup> Semester Examination**  
**BOTANY**  
**(Plant Anatomy and Embryology)**  
**Paper : HCT : 2.2**  
**(New)**

Time : 3 Hours

Maximum Marks : 80

***Instructions to Candidates:***

- 1) Answer any *five* questions
- 2) *Q.No. 1* is compulsory.

1. Answer in **one** or **two** sentences.

(10×2=20)

- i) Periblem.
  - ii) Callose plugs.
  - iii) Phellem.
  - iv) Paracytic stomata.
  - v) Male germ unit.
  - vi) Fillform apparatus.
  - vii) Nucellar embryo.
  - viii) Diplospory.
  - ix) Bast fibre.
  - x) Ruminant endosperm.
2. Explain the ultrastructure of xylam and a note on its function. (15)
3. Describe anomalous secondary growth in *Tinospora*. (15)
4. Explain the types and significance of apomixis. (15)
5. Describe the organization of mature embryo sac and add a note on its nutrition. (15)

6. Answer any **THREE** of the following :

**(3×5=15)**

- a) Misto chemistry of cambium.
  - b) Types of trichomes.
  - c) Types of Tapetum and their functions.
  - d) Somatic Embryogenesis.
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**PGIIS-O 1076 A-18**  
**M.Sc. II<sup>nd</sup> Semester Examination**  
**BOTANY**  
**(Ecology and Environmental Biology)**  
**Paper : HCT : 2.1**  
**(Old)**

**Time : 3 Hours**

**Maximum Marks : 80**

***Instructions to Candidates:***

*Answer any five questions. Q.No. 1 is compulsory.*

1. Answer in **One** or **Two** sentences. (10×2=20)
- a) Producers.
  - b) Hydrosere.
  - c) Competition.
  - d) Litho sphere.
  - e) Acid rain.
  - f) Toxicology.
  - g) Remote sensing.
  - h) PAN
  - i) Commensalism.
  - j) Biosphere
2. Write an account of Nitrogen biogeochemical cycle. (15)
3. Give a detailed account of plant succession. (15)
4. Discuss the cancer and consequences of water pollution. (15)
5. Explain climate change and its effects on vegetation. (15)

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6. Write short notes on any **THREE** of the following :

**(3×5=15)**

- a) Ecotypes and ecads
  - b) Ozone depletion.
  - c) Environmental monitoring.
  - d) Environmental Protection Acts.
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**PGIIS-N 1080 A-18**  
**M.Sc. II<sup>nd</sup> Semester Examination**  
**BOTANY**  
**(Ecology and Environmental Biology)**  
**Paper : HCT - 2.1**  
**(New)**

Time : 3 Hours

Maximum Marks : 80

***Instructions to Candidates:***

- 1) *Answer any five questions*
- 2) *Q.No. 1 is compulsory.*

1. Answer in **ONE** or **TWO** sentences.

(10×2=20)

- i) Niche.
- ii) Benthic zone.
- iii) Azatobacter
- iv) Ecotype
- v) Competition.
- vi) Soil profile.
- vii) Toxicology.
- viii) Biodegradation.
- ix) Ozone depletion.
- x) Energy flow.

2. Give an account of primary productivity and its measurement in an aquatic ecosystem. (15)
3. Write an account of water bodies and their classification. (15)
4. Write an essay on Air pollution. Add a note on its effects on plants. (15)
5. Give an account of Environmental protection Act and current environmental issues in India. (15)

6. Answer any **THREE** of the following :

**(3×5=15)**

- a) Carbon cycle.
- b) Rain water harvesting.
- c) Bio accumulation and their effects.
- d) Remote sensing and its applications.





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**PGIIS-O 1074 A-18**  
**M.Sc. II<sup>nd</sup> Semester Examination**  
**BOTANY**  
**(Medicinal and Aromatic Plants)**  
**Paper : SCT - 2.3.1**  
**(Old)**

Time : 3 Hours

Maximum Marks : 80

***Instructions to Candidates:***

- 1) *Answer any five questions*
- 2) *Q.No. 1 is compulsory.*

1. Answer in **one** or **two** sentences.

(10×2=20)

- i) Aromatic oil
- ii) Sushruta sumhita
- iii) Crystallography
- iv) Homeo pathy
- v) Mushrooms
- vi) Wild Crafting.
- vii) Withania somnifera
- viii) Deterioration
- ix) Antihelminthic.
- x) Pharmocognosy.

2. Give an account on the Traditional systems of medicine in Ayurveda.

(15)

3. Explain in detail the methods and preparation of herbal drugs for the treatment of gastrointestinal disorders.

(15)

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(1)

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4. Describe in detail the Cultivation of Lemon grass. (15)
5. Explain the classification and properties of Non proteinous amino acids. (15)
6. Answer any **THREE** of the following : (3×5=15)
- a) Importance of ethno - botany.
  - b) Atropine.
  - c) Archaeo ethno botany.
  - d) Richard Evans schultes.
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**PGIIS-N 1078 A-18**  
**M.Sc. II<sup>nd</sup> Semester Examination**  
**BOTANY**  
**(Medicinal And Aromatic Plants)**  
**Paper : SCT -2.3.1**  
**(New)**

Time : 3 Hours

Maximum Marks : 80

***Instructions to Candidates:***

- 1) *Answer any five questions*
- 2) *Q.No. 1 is compulsory.*

1. Answer in **one** or **two** sentences. **(10×2=20)**
  - i) Unani.
  - ii) Aromatherapy.
  - iii) Tibetan.
  - iv) J.W. Harshberger.
  - v) Pulses as medicine.
  - vi) IPR
  - vii) Raw drug
  - viii) Alkaloids.
  - ix) Lectins.
  - x) Amino acids.
2. Write an account on role of ethnomedicine in modern health care system. **(15)**
3. Explain in detail the role of herbal drugs in the treatment of cancer and diabetes. **(15)**
4. Write an account on the cultivation of medicinal and aromatic plants. **(15)**
5. Discuss the analysis of raw drugs based on microscopic and macroscopic features. **(15)**

6. Write short notes on any **THREE** of the following :

**(3×5=15)**

- a) Controversial drugs.
  - b) Pest control.
  - c) Historical account of Ethnobotany.
  - d) Importance of plants in general tonic.
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