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Paper Code: B040301T

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(SVSU:2024-25/R)

Enrollment No.

Program Name: B.Sc. Environmental Science

III Semester / II Year Examination

Subject Code: B040301T

Subject Name: Flowering Plants Identification & Aesth

Characteristics

[Max. Marks : 75]

[Time : 03:00 Hours]

Note: 1. Attempt all the questions as per given instructions.

[01×15=15]

I. Multiple Choice Questions (MCQs)

I Roots that develop from plant parts other than the radicle are:

- (a) Epicaulous (b) Fibrous (c) Adventitious (d) Epiphyllous

II Phyllotaxy is—

- (a.) Folding leaf in the bud (b) Arrangement of leaves on the stem
(c). Both (1) and (2) (d) None

III Microspermae is series of

- (a) Dicotledons (b) Gamopetalae
(c) Monochlomydae (d) Monocotyledon

IVis the largest and oldest botanical garden in India.

- (a) Lyod's Botanical Garden (b) Indian Botanical Garden
(c) Hyderabad Botanical Garden (d) Malabar botanical Garden

V Botanical Capital of world is—

- (a)Singapore Botanical Garden, Singapore
(b) Royal Botanical Garden, England
(c) Montreal Botanical Garden, Canada
(d) Brooklyn Botanical Garden, New York

VI Class monocotyledon is characterized by presence of

- (a)seed with two cotyledons (b) pentamerous flower
(c) reticulate venation (d) seed with single cotyledon

VII The system of classification proposed by Theophrastus is....

- (a)Natural (b) Artificial (c) Phylogenetic (d) None of these

VIII .The name of family should normally have an ending.....

- (a) oideae (b) ales (c) ceae (d) ineae

IX In racemose inflorescence, floral axis:

- (a) Terminate into flower.
(b) Grows continuously and flowers appear laterally
(c) Convert into flower.
(d) None

X Phylogeny is the study of

- (a) Evolution of plants

(b) Origin and development of plants

Printing Pages : 2

Paper Code: B150301T

A (SVSU:2024-25/R)

Enrollment No.

Program Name B.Sc. Environmental Science

III Semester / II Year Examination

Subject Code: B150301T

Subject Name: Biodiversity and its Conservation

[Max. Marks : 75]

[Time : 03:00 Hours]

Note : 1. Attempt all the questions as per given instructions.

I. Multiple Choice Questions (MCQs)

[01×15=15]

I The main causes of biodiversity loss today are:

- (a) Habitat loss and fragmentation (b) Over-exploitation
(c) alien species invasions (d) Co-extinctions

II IUCN refers to:

- (a) International Union for Conservation of Nuts
(b) International Union for Conservation of Nature
(c) International Union for Conservation of Natural habitat
(d) International Union for Conservation of Number

III What are the species called whose number of individuals is greatly reduced recently and is decreasing continuously?

- (a) Endangered (b) Rare (c) Vulnerable (d) Indeterminate

IV How many species of plants are used for the production of the drugs currently sold in the market worldwide?

- (a) 2 % (b) 35 % (c) 25 % (d) 5 %

V Which of the following statements is true?

- (a) Diversity exists only at the species level (b) Diversity exists only at the macromolecular level (c) Diversity exists at all levels of biological organization (d) Diversity exists at the genetic level only

VI Biodiversity loss is now one of the world's most pressing crises. The primary reason for this is:

- (a) We cannot do anything about it (b) We are not responsible for this loss (c) Lack of knowledge (d) It affects only the developing countries

VII Which of the following best defines biodiversity?

- (a) The diversity of life forms on Earth
(b) The number of species in a specific area
(c) The variety of ecosystems in a region
(d) The genetic variation within a species

VIII Which of the following ecosystems typically has the highest species diversity?

- (a) Coral reefs (b) Deserts (c) Grasslands (d) Boreal forests

[1]

20/12/24

C (SVSU:2024-25/R)

B.Sc. Env
2nd Year

16/12/24

XI This is considered as a demerit of the 'Engler and Prantl' in the system of classification:

- Gymnosperms are placed between monocotyledons and dicotyledons
- Dicotyledons are placed after monocotyledons
- Dicotyledons are placed before monocotyledons
- Gymnosperms are placed among Dicotyledons

XII Phylogenetic classification is based on _____.

- Overall similarities
- Habit of plants
- Common evolutionary descendants
- All of these

XIII Water is absorbed by:

- Root cap
- Root apex
- Root hairs
- Root

XIV Choose the right answer for the common characteristic in Plant taxonomy.

- Morphology
- Palynology
- All of the Above
- Anatomy

XV Phenetic classification is based on:

- Observable characteristics of existing entities
- The ancestral lineage of existing organisms
- Dendrograms based on DNA characteristics
- Sexual characteristics

2. Answer in long (any three) [10×3=30]

- Describe in detail about taxonomic resources and its significance.
- Short notes on the following:
 - Herbarium
 - Botanical garden
 - GPS tagging
 - Monoadelphous condition
- Discuss in detail about cladistics and differentiate between cladistics and phenetics.
- Give the silent features of family Solanaceae and draw floral formula of the family.

3. Answer in short (any five) [6×5=30]

- Tetramerous flowers are found in which family?
- Describe the role of roof garden and hedges in a garden?
- Write a short note on magnetic disks.
- What does Microsoft power point signify? Give its application.
- What are the advantages of botanical nomenclature?
- How plants can be identified?
- Give the name of Five Botanical gardens.

IX Which factor does NOT directly contribute to the loss of biodiversity?

- Habitat destruction
- Climate change
- Species introduction
- Genetic diversity

X Which international treaty focuses on the protection of wetlands of international importance, particularly as habitats for waterfowl?

- Ramsar Convention
- Cartagena Protocol
- Bonn Convention
- Vienna Convention

XI Which of the following is not the criterion to qualify as a hotspot?

- It must contain at least 1,500 species of vascular plants (> 0.5% of the world's total) as endemics
- It has to have lost $\geq 70\%$ of its original native habitat
- It must be the part of underdeveloped country
- None of the above

XII The maximum biodiversity is found in:

- Arctic forests
- Tropical rain forests
- Temperate forests
- Coniferous forests

XIII Variation in _____ enables different species to adapt to challenges and helps them to survive in future.

- Species
- Ecosystem
- Genes
- Cells

XIV What is the primary cause of the current high rates of species extinction?

- Natural selection
- Human activities
- Volcanic eruptions
- Meteor impacts

XV MAB program stands for:

- Material Biology
- Man and Biotechnology
- Man and Biodiversity
- Man and Biosphere

2. Answer in long (any three) [10×3=30]

- Give the concept of biodiversity and explain in-situ and ex-situ methods of biodiversity conservation.
- What is Phytogeography? Explain the phytogeographical regions of India.
- What do you mean by habitat loss? Explain the different causes behind it.
- Explain genetic diversity, its measures and determinants.

3. Answer in short (any five) [6×5=30]

- Write is plant invasion? Write on some examples of exotic species.
- Write a note on habitat restoration.
- Explain the biodiversity status of Eastern Himalayas.
- Describe species extinction and their consequences.
- Give a note on wildlife organizations in India.
- Give a note on importance of botanic gardens.
- What are endangered species? Give some examples also.