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Paper Code: MSC-BOT-406

B (SVSU:2023-24/R)

Enrollment No.

M.Sc. Botany

IInd YEAR, IVth Semester Examination

SUB-NAME: Plant Health Management: MSC-BOT-406

Note: 1. Attempt all the questions as per given instructions.
2. Write the correct answer of MCQs.

[Time : 3:00 Hours]

[Max. Marks : 70]

- I. **Objective Questions: Answer All Questions.** [15×1=15]
- Which of the following is not a method by which pathogens affect the yield of crops?
a) Reduce the quantity of yield b) Reduce the quality of crop produce
c) Increase in cost production d) Increase the flowering period
 - Which of the following is not a method of the perpetuation of disease by the pathogen?
a) The entry of pathogen through natural openings
b) Reproduction by pathogen
c) Reducing the quantity of yield
d) Direct penetration of the pathogen
 - Which of the following is not a method of reducing total biomass of crop?
a) Damage to leaf tissues b) Studying the crop
c) Killing branches d) Stunting effect
 - Diseases caused by nematodes in plants is-
a) Wilts b) Cavity spot c) Scab d) Root-knot
 - Plant diseases are broadly classified into nonparasitic and parasitic.
a) True b) False
 - Which disease is caused by *Anthracocephalum*
a) Ergot b) Canker c) Red rot d) Late blight
 - Which of the following is not related to Necrosis?
a) Curling of leaves b) Death of tissues
c) A common symptom of fungal diseases d) Discolouration of leaves
 - Which disease is caused by *Phytophthora infestans* in potato?
a) Downy mildew b) Late blight c) Tikka d) Leaf rust
 - Which of the following is not related to Rots?
a) Discolouration of tissue b) Degeneration of succulent tissue
c) Distortion of leaves d) It is of two types

10. Wilting is the loss of turgidity and drooping of leaves.
a) True b) False
11. Which of the following is not true regarding Chlorosis?
a) Yellowing of leaves b) Death of plant tissues
c) Non-formation of chlorophyll d) Destruction of chlorophyll
12. Which of the given diseases is related to Wheat?
a) Tikka b) Downy mildew c) Leaf rust d) Late blight
13. The green ear is a type of disease?
a) Bacterial b) Fungal c) Viral d) Protozoan
14. Which of the given diseases is related to Cumin seed?
a) Phomopsis blight b) Alternaria blight
c) Late blight d) Anthracnose blight
15. The methods of control based on the principles of directly attacking the pathogen are...?
a) Avoiding the contact between the pathogen and host.
b) Plant and field sanitation for reduction of inoculum.
c) Destruction of parasite if it superficially present.
d) All of the above.

II Long Question: Answer Any Three- [10×3=30]

1. Write different methods defense mechanism. Discuss in detail.
2. Write the symptoms, name of the causal agent, disease cycles and management of damping off
3. What do you understand by bio-deterioration of seed in storage? Discuss in detail with examples.
4. How mycorrhiza benefitted in agriculture and horticulture. Give classification of mycorrhiza and discuss in detail .

III. Short Question: Answer any Five- [5×5=25]

1. Give a detailed account on biological control methods.
2. How will you control seed borne diseases by using chemical methods of control?
3. Identify any two disease of shisam by studying its symptoms, name of the causal agent and suggest its control methods.
4. How will you identify and control fire blight of apple?
5. Briefly discuss about Basic Diagnosis of Plant Diseases.
6. Write the symptoms, name of the causal agent and control of foot rot of papaya.
7. Write the symptoms, name of the causal agent and control of smut of wheat.

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Paper Code: MSC-BOT-402	B (SVSU:2023-24/R)
Enrollment No.	

MSc Botany
IInd YEAR, IVth Semester EXAMINATION
SUBJECT NAME: Medicinal Plant
MSC-BOT-402

[Time : 3:00 Hours]

[Max. Marks : 70]

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

1. Objective Questions: Answer All Questions.

[15x1=15]

- I. Which of the following part of Cinchona tree is used to treat malaria?
 a) Bark b) Root c) Leaf d) Seed
- II. Which of the following plants contains drug at its bark for curing heart disease?
 a) Mango b) Cinchona c) Arjuna d) Tobacco
- III. Who is belongs to medicinal Plant?
 a) Lemon grass b) Wheat c) Sorghum d) None of these
- IV. Vrikshayurveda belongs to
 a) Animals b) Cow c) Plant d) None of these
- V. Gavayurveda belongs to:
 a) Cows b) Horses c) Elephants d) All of these
- VI. Demonology belongs to
 a) Kaya Chikitsa b) Bala Chikitsa
 c) Graha Chikitsa d) Shalya Chikitsa
- VII. Sattva belongs to:
 a) Sensory organ b) Mind c) Soul d) None of these
- VIII. Rajo guna belongs to
 a) Vata b) Pitta c) Kapha d) None of these
- IX. Vasantha ritu is:
 a) Autumn b) Spring c) Summer d) Rainy
- X. Kalka type of medicine formulation is:
 a) Juicy extraction b) Medicinal Pastes
 c) Decoctions d) None of these
- XI. Which one of the following is not included under In-situ conservation?
 a) Sanctuary b) Botanical Gargen
 c) Biosphere reserve d) National Park
- XII. Which of the following is best method of germplasm conservation?
 a) Botanical Garden b) Seed Ban
 c) Herbarium d) Zoological Park

- XIII. Lavana term use in Ayurveda for
a) Bitter b) Sour c) Salty d) Sweet
- XIV. Abhisanga term use in Ayurveda for
a) Injuries b) Infection c) Fracture d) None of these
- XV. Greeshma belongs to
a) Rainy b) Winter c) Summer d) Spring

2. Long Question: Answer Any Three [10×3=30]

- I. What do you mean by propagation? Give its significance in medicinal plant cultivation.
- II. Give a detailed account on scope and importance of Ayurvedic plants
- III. Write down the role of Ayurvedic plant extract on Blood pressure and Jaundice disease.
- IV. What do you mean by green house? Give its significance in production of medicinal plants nursery.

3. Short Questions: Answer Any Five. [5×5=25]

- I. Write a short note on types of Rasayana
- II. Describe the Unani medicine system.
- III. Give the short notes on In-situ and Ex-situ conservation
- IV. What do you mean by Endemic medicinal plants?
- V. Write a short note on Basic tastes of universe.
- VI. What is the role of Grafting in medicinal plants cultivation?
- VII. Explain about Sidha system.

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M.Sc. (Botany)

IInd YEAR IVth Sem / EXAMINATION

Subject: Ethenobotany

MSC BOT 404

[Time : 3:00 hrs]

[Max. Marks : 70]

Note: Attempt all the questions as per given instructions.

1. Multiple Choice Questions

[01×15=15]

I. ___ is not generally seen in biodiversity hotspot:

- a. Endemism
- b. Loss of diversity
- c. Species richness
- d. Lesser inter-specific competition.

II. ___ occurs when the death of the last individual in a species occurs.

- a. Adaptation
- b. Speciation
- c. Phylogenetic diversity
- d. Extinction

III. The study of medicinal plants is called?

- a. Pharmabryology
- b. Pharmacology
- c. Pharmamycology
- d. Pharmacognosy

IV. Ethenobryology is ethenobotanical study relavent to?

- a. Bryophytes
- b. Fungi
- c. Conifers
- d. Mycorrhizae

V. The term green revolution was coined by:

- a. M.S.Swaminathan
- b. William Gaud
- c. Chares Elton
- d. E.Odum

VI. Conservation within the natural habitats is:

- a. *In-situ* conservation
- b. *In-vivo* conservation
- c. *Ex-situ* conservation
- d. *Ex-vivo* conservation

VII. *Ex-situ* conservation includes:

- a. Botanical gardens
- b. Germ plasm bank
- c. Zoo
- d. All of the above

VIII. The pulses through symbiotic association with rhizobium species

fix nitrogen; the rhizobium species belong to?

- a. Fungal kingdom
- b. Bacterial kingdom
- c. Plant kingdom
- d. Viral kingdom

IX. The pulses also called legumes belong to the family.

- a. Poaceae
- b. Solanaceae
- c. Fabaceae (Leguminosae)
- d. both a & c

X. Which of these is not a cereal?

- a. Gram
- b. Rice
- c. Maize
- d. Barley

XI. Which of these is not a pulse?

- a. Gram
- b. Mung bean
- c. Peas
- d. Rice

XII. Amongst these important cereals are?

- a. Wheat, barley b. Rice
- c. Maize d. All of above

XIII. The scientific name for barley plant is?

- a. *Oryza sativa* b. *Triticum aestivum*
- c. *Hordeum vulgare* d. *Avena sativa*

XIV. At present about 60% of the cultivated land of the world is devoted to?

- a. Cereals b. Pulses
- c. Legumes d. Millets

XV. The caryopsis is a characteristic dry fruit of?

- a. Cereals b. Pulses
- c. Legume d. Gram

2. Answer in long (any three three)

[10×3=30]

- I.** Describe in details strategies for conservation.
- II.** Define the paleo-ethenobotany. Explain the difference between paleo-botany and ethenoecology.
- III.** Define the Folk medicines. Explain its application in details.
- IV.** Explain the paleo-botanical aspect.

3. Answer in short (any five)

[5×5=25]

- I** What do you mean by folk medicine of ethenobotany.
- II** Describe the ethenoecology.
- III** Explain the role of IUCN.
- IV** Describe the national parks?
- V** Explain the Avenue Tree.
- VI.** Explain the ornamental plant
- VII.** Write the short notes on

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Paper Code: MSC- BOT- 403	C	(SVSU:2023-24/R)
Enrollment No.		

M.Sc. Botany
IInd YEAR, IV SEMESTER EXAMINATION
SUBJECT NAME: Plant Biotechnology
MSC- BOT 403

[Time : 3:00 Hours]

[Max. Marks : 70]

- I. Objectives Question: Answer All Question [15×1=15]**
- I.** The production of secondary metabolites requires the use of
(a) Meristem (b) Protoplast (c) Axillary buds (d) Cell suspension
- II.** The pair of hormones required for a callus to differentiate are
(b) Ethylene and Auxin (b) Auxin and cytokinin
(c) Auxin and Absciscic acid (d) Cytokinin and gibberellin
- III.** The formation of embryoids from the pollen grains in the tissue culture medium is due to
(a) Organogenesis (b) Test tube culture
(c) Double fertilization (d) Cellular totipotency
- IV.** Totipotency refers to
(a) Development of fruits from flowers in a culture
(b) Development of an organ from a cell in a culture medium
(c) Flowering in a culture medium
(d) All of the above
- V.** Which of the following is the main application of embryo culture?
(a) Clonal propagation
(b) Production of embryoids
(c) Induction of somaclonal variations
(d) Overcoming hybridisation barriers
- VI.** Somaclonal variations are the ones
a. Caused by mutagens b. Produce during tissue culture
c. Caused by gamma rays d. Induced during sexual embryogeny
- VII.** Which of the following plant cell will show totipotency?
a. Xylem vessels b. Sieve tube c. Meristem d. Cork cells
- VIII.** Which vector is mostly used in crop improvement?
a. Plasmid b. Cosmid c. Phasmid d. *Agrobacterium*
- IX.** The growth of plant tissues in artificial media is called as
a. Gene expression b. Transgenesis
c. Plant tissue culture d. Cell hybridization

- X. Which is a genetically modified crop?
a. Bt-cotton b. Bt-brinjal c. Golden rice d. All of the above
- XI. The first transgenic plant to be produced is
a. Brinjal b. Tobacco c. Rice d. Cotton
- XII. The gene transfer technique involves a tiny needle that used to inject DNA into a cell lacking that DNA sequence is termed as _
a. Electroporation b. Liposome transfer
c. Microinjection d. Particle bombardment
- XIII. The phenomenon of mature cells in meristematic state to produce callus is
a. Dedifferentiation b. Redifferentiation
c. Totipotency d. All the above
- XIV. A haploid culture occurs through anther or pollen culture is called as
a. Gynogenesis b. Androgenesis
c. Organogenesis d. Morphogenesis
- XV. Somatic hybridization is achieved through
a. Grafting
b. Protoplast fusion
c. Conjugation Recombinant DNA technology
d. Recombinant DNA technology

II. Long Question : Answer Any Three [10×3=30]

1. Explain briefly the factors effecting of micropropagation in Agricultural crops.
2. What is Genetic transformation? Explain its significance.
3. Describe the Tissue culture lab setup in details.
4. Explain the Herbicide resistance and Fungal resistance.

III. Short Question: Answer any Five [5×5=25]

- 1 Describe the Aseptic cell culture.
- 2 Explain the Primary cell lines.
- 3 Discuss the Animal cell products.
- 4 Explain the somaclonal variation.
- 5 Describe the electroporation.
- 6 Explain the protoplasm fusion.
- 7 What do you mean by molecular farming.