

D-5108

Sub. Code

34611

DISTANCE EDUCATION

M.Sc.(Botany) DEGREE EXAMINATION, DEC 2020.

First Semester

PLANT DIVERSITY

(CBCS 2018–19 Academic Year onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define coenobial colony.
2. Stephanokont.
3. What is cryptoblasts?
4. What is soridia?
5. Parasexuality in fungi.
6. Comment on holocarpic and eucarpic fungus.
7. Write a short note on hornworts.
8. Stegocarpous moss.
9. Write a short note on carinal canals.
10. Living fossil.

PART B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write a brief account on diplobiontic triphasic life cycle.

Or

- (b) Give an outline of thallus organization in green algae.

12. (a) Discuss in detail about classification of lichens.

Or

- (b) Write a short account on phycomycetes.

13. (a) Compare the morphology of liverworts, hornworts and mosses.

Or

- (b) Write a short account on sporophytes of Sphagnales and Bryales.

14. (a) Compare the morphology of cycadales and gnetales.

Or

- (b) Write a detail account on fossil gymnosperms.

15. (a) Write an essay on classification of gymnosperms.

Or

- (b) Differentiate Lycopsida from pteropsida.

PART C — (3 × 10 = 30 marks)

Answer any THREE of the following.

16. Give the outline of the classification of algae studied by you.
 17. Write a detail account on frutification in fungi.
 18. Discuss in detail about life cycle of Puccinia.
 19. Write an essay on structural variations found in liverworts.
 20. Write a synoptic account on classification of Pteridophyte.
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D-5109

Sub. Code

34612

DISTANCE EDUCATION

M.Sc.(Botany) DEGREE EXAMINATION, DEC 2020.

First Semester

PLANT TAXONOMY

(CBCS 2018–19 Academic Year onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Write a short note on ecotype.
2. What is classification?
3. Briefly discuss about Ranales.
4. What is biosystematics?
5. Write a note on heterotypic synonyms.
6. Comment on mistletoes.
7. Write a short note on parietal placentation.
8. What is pappus?
9. Write a short note on personate corolla.
10. What is lomentum?

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b)

11. (a) Write a brief account on molecular systematics.

Or

- (b) Give an outline of Hutchinson's classification.

12. (a) Discuss in detail about typification.

Or

- (b) Give a synoptic account on modern approaches in taxonomy.

13. (a) Write down the key characters of Amaranthaceae.

Or

- (b) List out the economic importance of Arecaceae.

14. (a) Briefly discuss the economic importance of Mimosaceae.

Or

- (b) Compare the androecium of apocynaceae and Polygalaceae.

15. (a) List out the advanced characters of asteraceae.

Or

- (b) Enumerate the primitive characters of Magnoliaceae.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write an essay on binomial system of nomenclature.
 17. Give an outline of Engler and Prant's classification and add a note on its demerits.
 18. Discuss in detail about chemotaxonomy.
 19. Write the vegetative and floral characters of Rubiaceae.
 20. Compare the floral characters of Bignoniaceae and Myrtaceae.
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D-5110

Sub. Code

34613

DISTANCE EDUCATION

M.Sc.(Botany) DEGREE EXAMINATION, DEC 2020.

First Semester

BIOLOGICAL TECHNIQUES IN BOTANY

(CBCS 2018–19 Academic Year onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is microscopic scale?
2. Haemocytometer.
3. What is fixation?
4. What is a microtome?
5. Cell fractionation.
6. Comment on mountant.
7. Feulgen.
8. Define : Tracer.
9. What is AFLP?
10. Write a short note on RAPD.

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b)

11. (a) Write a brief account on microphotography.
Or
(b) Give an outline of SEM.
12. (a) Discuss in detail about staining of plant tissues.
Or
(b) Write a short account on dehydrating agents used in microtome.
13. (a) Briefly discuss the embedding methods.
Or
(b) Write a short account on microslide preparation.
14. (a) Write a synoptic account on HPLC.
Or
(b) Write a detail account on agarose gel electrophoresis.
15. (a) Write an essay on autoradiography.
Or
(b) Briefly discuss about PCR.

PART C — (3 × 10 = 30 marks)

Answer any THREE of the following.

16. Write an essay on TEM.
17. Write a detail account on microtomy.
18. Discuss in detail about histochemical techniques.
19. Write an essay on western blotting.
20. Write an essay on SDS-PAGE.

D-5114

Sub. Code

34631

DISTANCE EDUCATION

M.Sc.(Botany) DEGREE EXAMINATION, DEC 2020.

Third Semester

MICROBIOLOGY AND PLANT PATHOLOGY

(CBCS 2018–19 Academic Year onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define the term pasteurization.
2. Write the role of pili.
3. Which are chemotrophs?
4. Cell wall less bacteria.
5. Define the term virion.
6. Write the role of Amylase.
7. Write the significance of log phase.
8. RNA virus.
9. Anthrac.
10. Define tyloses.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Write briefly about the any five biochemical characters of bacteria.

Or

- (b) Differentiate archaebacteria from eubacteria.

12. (a) Classify the bacteria based on their mode of nutrition.

Or

- (b) Diagrammatically explain the cell wall of gram positive bacteria.

13. (a) Comment on spore forming bacteria.

Or

- (b) What is flagellin? Explain the flagellar structure with neat diagram.

14. (a) Write short notes on purification of virus.

Or

- (b) Write briefly about phytoplasma diseases.

15. (a) Write notes on Koch's postulates.

Or

- (b) Explain about the following :

(i) Blight

(ii) Rust.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write in detail about the plant disease caused by fungi.
 17. Describe about the ultra-structure of bacteria.
 18. Write the outline classification of virus.
 19. Describe about the leaf spot disease in groundnut.
 20. Write in detail on any viral disease in human.
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D-5115

Sub. Code

34632

DISTANCE EDUCATION

M.Sc.(Botany) DEGREE EXAMINATION, DEC 2020.

Third Semester

ECOLOGY, BIODIVERSITY CONSERVATION AND
ECONOMIC BOTANY

(CBCS 2018–19 Academic Year onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is mean by abiotic?
2. Define the term biomass.
3. Write the significance of commensalism.
4. Whom coined the term biodiversity?
5. Define endemism.
6. Write the expansion of WTO.
7. Write the significance of trademark.
8. Write the merit of GM foods.
9. Write the traditional use of turmeric.
10. Write the raw material for margossa.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Describe the concept of food chain.

Or

- (b) Comment on mutualism.

12. (a) List out the values of biodiversity.

Or

- (b) Write short notes on red data book.

13. (a) List out the role of IPR.

Or

- (b) Write brief notes on plant breeder's right.

14. (a) Explain about transgenic plants.

Or

- (b) Describe the cultivation method of pepper.

15. (a) Write the post harvesting technique and uses of Jute.

Or

- (b) Describe the cultivation and uses of *Rauwolfia serpentina*.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write the detailed notes on species interaction.
17. Discuss in detail about the Biodiversity Act of India 2001 and 2009.

18. Write an essay on establishment and function of GATT.
 19. Write an account on primary and secondary production in ecosystem.
 20. Explain the cultivation method, processing and uses of Ginger plant.
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D-5116

Sub. Code

34633

DISTANCE EDUCATION

M.Sc.(Botany) DEGREE EXAMINATION, DEC 2020.

Third Semester

ALGAL TECHNOLOGY AND MUSHROOM TECHNOLOGY

(CBCS 2018–19 Academic Year onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Write the role of anabena in agriculture.
2. Write the scientific importance of agar-agar.
3. Write any two names of an edible mushroom.
4. Write the significance of nitrogen fixation.
5. What is mean by trabeculae?
6. Define the term inoculation.
7. Write any two names of sulphur containing aminoacids.
8. Define the term virion.
9. Write the environment importance of *Pleurotus*.
10. Write any two methods of mushrooms storage.

PART B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) List out the economic importance of algae.

Or

- (b) Enlist medicinal uses of mushrooms.

12. (a) Give a note on sea weed.

Or

- (b) Write the occurrence and distribution of macro algae.

13. (a) Elaborate note on packing and preservation of mushrooms.

Or

- (b) Briefly mention about spawn preparation of fungi.

14. (a) Write the nutritive value of mushrooms.

Or

- (b) List out the factors affecting mushroom cultivation.

15. (a) Give a note on insects attacking mushrooms.

Or

- (b) Elaborate account on marketing of mushrooms in India.

PART C — (3 × 10 = 30 marks)

Answer any THREE of the following questions.

16. Write the methods and application of algal cultivation.
 17. List out the role of seaweeds in horticulture and agriculture field.
 18. Elaborate note on protoplast fusion technique for macro algae.
 19. Write the preparation of compost for the cultivation of mushrooms.
 20. Mention the methodologies adopted for maintenance of pure culture of mushroom fungi.
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D-6497

Sub. Code

34641

DISTANCE EDUCATION

M.Sc (Botany) DEGREE EXAMINATION, DECEMBER 2020.

Fourth Semester

PLANT MOLECULAR BIOLOGY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : 3 hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions

1. Define the term Nucleus.
2. Write the location of cristae.
3. Write the physical properties of cytoplasm.
4. What are enzyme?
5. Define antibiotics.
6. Write the role plasmids.
7. Differentiate- herbicide and fungicide.
8. What are ribosomes?
9. Write the expansion of RAPD.
10. Define genetic diversity.

SECTION B — (5 × 5 = 25 marks)

Answer all questions. Choosing either (a) or (b)

11. (a) Bring out the features of plant genes.

Or

- (b) Describe the structure of chloroplast.

12. (a) Explain the mechanism of gene expression.

Or

- (b) Write an account on antibiotic.

13. (a) Describe mechanism of tDNA transfer to plants.

Or

- (b) List out the types of vectors.

14. (a) Write short notes on RFLP.

Or

- (b) Give an account on chloroplast energy.

15. (a) Write short notes on AFLP

Or

- (b) Write the significance of transgenic plants.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the structure and function of Mitochondria.
17. Write an essay on plant hormone.
18. Describe the mechanism of symbiotic nitrogen fixation by rhizobium.
19. Write and elaborate account on insect pest resistance in plants.
20. List out the various types of molecular marker.

D-6498

Sub. Code

34642

DISTANCE EDUCATION

M.Sc (Botany) DEGREE EXAMINATION, DECEMBER 2020.

Fourth Semester

BIostatistics, Biophysics and Bioinformatics

(CBCS 2018 - 2019 Academic Year onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is Mean?
2. Write the formula of Standard deviation.
3. Write any two sources of Data.
4. What is mean by energy crisis?
5. Expansion of LASER.
6. Who propose the term an atom.
7. Differentiate-Plasmid and Cosmid.
8. Write the role of herbicide.
9. Write the significance Chloroplast.
10. Define the term Phylogenetic tree.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions, Choosing either (a) or (b)

11. (a) Write an account on random sampling technique.

Or

- (b) Discuss the graphical representation of data.

12. (a) Explain the measures of central tendency.

Or

- (b) Explain on energy transduction in biological system.

13. (a) Explain the structure of an atom.

Or

- (b) Bring out the features of nitrogen fixation.

14. (a) Write short note on fruit ripening.

Or

- (b) Comment on transgenic plants.

15. (a) Write an account on molecular markers.

Or

- (b) Write a critical note on Bioremediation.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the types of population.
 17. Write an essay on photobiology.
 18. Write a detailed account on plant genetic engineering.
 19. Explain the following (a) RAPD and (b) SCAR.
 20. Describe the phylogenetic tree.
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D-6499

Sub. Code

34643

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, DECEMBER 2020.

Fourth Semester

Botany

HORTICULTURE AND PLANT TISSUE CULTURE

(CBCS 2018 – 2019 Academic year onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is mean by Agronomy?
2. Write any two type of Irrigation.
3. Write the significance of seed dormancy.
4. Write any two name growth regulators.
5. What is mean by bulb?
6. Give the importance of terrace garden.
7. Define the term Lawn.
8. Bring out the importable of sequence alignment.
9. Expand the word FASTA.
10. What is mean by clone?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

11. (a) Write an account on random sampling technique.

Or

- (b) Discuss the graphical representation of data.

12. (a) Explain the measures of central tendency.

Or

- (b) Explain on energy transduction in biological system.

13. (a) Explain the structure of an atom.

Or

- (b) Bring out the features of nitrogen fixation.

14. (a) Write short note on fruit ripening.

Or

- (b) Comment on transgenic plants.

15. (a) Write an account on molecular markers.

Or

- (b) Write a critical note on Bioremediation.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the types of population.
17. Write an essay on photobiology.
18. Write a detailed account on plant genetic engineering.
19. Explain the following
 - (a) RAPD and
 - (b) SCAR.
20. Describe the phylogenetic tree.
