

For Candidates Admitted From 2018

2018 MBO 22C

ROLL NO.....

M.Sc. DEGREE EXAMINATIONS, APRIL 2019

SEMESTER - II BOTANY
ANATOMY AND EMBRYOLOGY

Time: 3 Hrs

Max. Marks: 75

PART - A (10 X 2 =20)

ANSWER ALL THE QUESTIONS

1. Meristem
2. Companion cells
3. Phellogen
4. Dehydration
5. Tapetum
6. Intine
7. Obturator
8. Fertilization
9. Cleavage polyembryony
10. Ethylene

PART - B (5 X 5 =25)

ANSWER ALL THE QUESTIONS

11. a. Briefly explain the theories of root apex organisation.
(or)
b. Write short notes on annual rings with its importance.
12. a. Explain the structure of Bignomia stem with special reference to its anomalous secondary growth.
(or)
b. Explain the types of nodes.
13. a. Describe the structure of anther wall.
(or)
b. Bring out the scope of palynology.
14. a. Discuss on the types of ovules.

(or)

b. Explain the development of Grass embryo.

15. a. Comment on the causes of polyembryony.

(or)

b. Describe Partheno carpy and mention its importance.

PART - C (3 X 10 =30)

ANSWER ANY THREE QUESTIONS

16. Write a detailed account on the components of Xylem tissue.
17. Write an essay on the role of microtechniques in botanical studies.
18. Describe the ultra structure of Pollen wall.
19. Explain the types of endosperm.
20. Briefly explain the development of seed.

For Candidates Admitted from 2010

18 MBO24E

REG.NO.....

M.Sc. DEGREE EXAMINATIONS, APRIL - 2019

BOTANY

SEMESTER : II

ELECTIVE : BIostatISTICS AND SEED TECHNOLOGY

Time : 3 HRS.

Max.Marks: 75

PART -A (10 X 2 =20)

ANSWER ALL THE QUESTIONS

1. Define Biostatistics
2. Write notes on Primary data
3. Double table
4. Frequency distribution
5. Median
6. Standard error
7. Degree of Freedom
8. Types of ANOVA
9. Hydrochory
10. Seed dormancy

PART -B (5 X 5 =25)

ANSWER ALL THE QUESTIONS

11. a. List out the scope of Biostatistics
(or)
b. Explain the types of data with suitable examples.
12. a. Write the general rules for Tabulation.
(or)
b. Briefly explain the diagrammatic presentation of data.
13. a. The weight of 10 fishes in gms is given below. Find the mean by direct method (or) Assured Mean Method.
SI. NO : 1 2 3 4 5 6 7 8 9 10
Weight : 12 15 11 19 16 20 14 20 12 11
(or)

- b. Define Standard Deviation, Write the formula, Merits and demerits of SD.
14. a. Bring out the features of Chi- square Test.
(or)
b. Elucidate the role of statistical tools in biology.
15. a. Describe the structures of seed coat with suitable illustration.
(or)
b. Write short notes on seed viability tests.

PART -C (3 X 10 =30)

ANSWER ANY THREE QUESTIONS

16. Write a detailed account on sampling techniques.
17. Explain the methods of graphical representation of data
18. Describe the types of correlation.
19. Discuss 'ANOVA'
20. Comment on the methods for breaking seed dormancy.

For Candidates Admitted From 2015-2017

2015-17 MBO 43C

ROLL NO.....

M.Sc. DEGREE EXAMINATIONS, APRIL 2019

SEMESTER - IV BOTANY
BIOTECHNOLOGY

Time: 3 Hrs

Max. Marks: 75

PART - A (10 X 2 =20)

ANSWER ALL THE QUESTIONS

1. Define callus
2. Comment on autoclave
3. What is protoplast?
4. Define pollen culture
5. What is Eco R1?
6. Define introns.
7. What is agro bacterium?
8. What are viral vectors?
9. Write short note on edible vaccines.
10. What is high lysine com ?

PART-B (5 X 5 =25)

ANSWER ALL THE QUESTIONS

11. a. What are the requirements of aseptic techniques in micropropagation?
(or)
b. Write down the application of Tissue culture.
12. a. Write note on artificial seed production.
(or)
b. Explain the procedure of protoplast fusion.
13. a. Comment on the scope of genetic engineering.
(or)
b. Write about specialized vectors and its importance.
14. a. Briefly describe particle gun bombardment.
(or)
b. Comment on electrophoration method of gene transformation.

15. a. Comment on stress resistance in plants.
(or)
b. Briefly explain cytoplasmic male sterility.

PART C - (3 X 10 = 30)

ANSWER ANY THREE QUESTIONS

16. Explain in detail the history of tissue culture.
17. Describe the events of somatic hybridization
18. Discuss the aim and scope of rDNA technology
19. Describe in detail the mechanism of TDNA transfer.
20. Write an essay on biosafety of genetically modified organism.

For Candidates Admitted From 2015-2017

2015-17 MBO 41C

ROLL NO.....

M.Sc. DEGREE EXAMINATIONS, APRIL 2019

SEMESTER – IV BOTANY

GENETICS, CYTOGENETICS AND PLANT BREEDING

Time: 3 Hrs

Max. Marks: 75

PART - A (10 X 2 =20)

ANSWER ALL THE QUESTIONS

1. What is the objective of test cross?
2. Differentiate between Multiple allele vs Multiple factor
3. Differentiate between DNA and Gene
4. What is the significance of Synapsis of Prophase I of meiosis?
5. What is nucleosome?
6. What is special about Y chromosome?
7. What is translocation in genetics? Where does it occur?
8. Define gene pool.
9. Differentiate between Pure line and Clone.
10. Define the phenomenon of heterosis.

PART-B (5 X 5 =25)

ANSWER ALL THE QUESTIONS

Draw diagrams wherever required

11. a) Explain the laws of genetics proposed by GJ Mendel
(or)
b) Explain the principles of quantitative genetics
12. a) Write an account on mutagens.
(or)
b) Illustrate the molecular mechanism of crossing over during Prophase I.
13. a) Explain how DNA repair is accomplished with energy from sunlight.
(or)
b) Explain the reasons for the high C-Values among eukaryotes

14. a) Illustrate cytoplasmic inheritance.

(or)

- b) Discuss the influences that tend to change gene frequencies in natural population
15. a) How is mutation breeding done for disease resistance.
(or)
b) Differentiate between the various selection strategies employed in breeding

PART - C (3 X 10 = 30)

ANSWER ANY THREE QUESTIONS.

Draw diagrams wherever required

16. Illustrate how gene interaction alters the phenotypic ratios of F₂ generation.
17. Discuss the organization and function of transposable elements in prokaryotes.
18. How are DNA repairs handled at the molecular level?
19. a. Explain the principles of Hardy-Weinberg law of population genetics.
b. Write about the factors that tend to change gene frequencies.(5+5)
20. How are breeding methods could result in crop improvement?

For Candidates Admitted From 2015-2017

2015-17 MBO 42C

ROLL NO.....

M.Sc. DEGREE EXAMINATIONS, APRIL 2019

SEMESTER – IV BOTANY

PLANT ECOLOGY, CONSERVATION AND
PHYTOGEOGRAPHY

Time: 3 Hrs

Max. Marks: 75

PART - A (10 X 2 =20)

ANSWER ALL THE QUESTIONS

1. Differentiate between environment and climate.
2. Define 'population'.
3. Differentiate between vegetation and community.
4. What is a climax community?
5. What is the underlying idea of food web and food chain?
6. Write few lines about Radioactive pollution.
7. Mention anyone draw back of social forestry
8. Write two salient features of Mangroves.
9. Define Continental drift.
10. Write any two salient features of tropical regions

PART - B (5 X 5 = 25)

ANSWER ALL THE QUESTIONS

Draw diagrams wherever required.

11. a) Explain the principles of limiting factors.
(or)
b) Enumerate the characteristics of population ecology.
12. a) Describe the methods of studying vegetation.
(or)
b) Illustrate the impact of human influences on succession.
13. a) Describe the general structure of ecosystem from the biotic components point of view.
(or)
b) How are e-wastes generated and managed?

14. a) Explain the principles and application of GIS.

(or)

- b) Describe the vegetation types of India.

15. a) Describe the phytogeographical domains of the world.

(or)

- b) Describe the phytogeographical domains of India.

PART - C (3 X 10 = 30)

ANSWER ANY THREE QUESTIONS.

Draw diagrams wherever required

16. Describe how global warming builds up. What are its consequences?
17. Discuss the process of succession in an aquatic environment
18. How are bioremediation strategies help to reclaim lands lost to pollution?
19. Discuss the role of forests as genetic resource.
20. Discuss the principles of Phytogeography with reference to plant distribution.

For Candidates Admitted From 2018

2018 MBO 21C

ROLL NO.....

M.Sc. DEGREE EXAMINATIONS, APRIL 2019
SEMESTER - II BOTANY

PLANT DIVERSITY - II
[PTERIDOPHYTES, GYMNOSPERMS AND PALEOBOTANY]

Time: 3 Hrs

Max. Marks: 75

PART - A (10 X 2 =20)

ANSWER ALL THE QUESTIONS

1. Heterospory
2. Apogamy
3. Characteristic features of *Lycopodium* Stem
4. Strobili
5. Microsporophyll
6. Megasporophylls
7. Pinus cone structure
8. *Ginkgo biloba*
9. Petrification
10. Molding

PART - B (5 X 5 =25)

ANSWER ALL THE QUESTIONS

11. a. Write short note on sporangium development in Pteridophytes.
(or)
b. Explain the Life cycle patterns of pteridophytes.
12. a. Write comparative account on psilopsida and Lycopsida.
(or)
b. Explain about the phylogeny of sphenophylum.
13. a. Give an account on characteristics features of Pteridospermales.
(or)
b. Briefly explain the salient features of Bennettitales.
14. a. Explain the general characters of Taxales.
(or)

b. Write an account on Gnetum Habit.

15. a. Write about the Radiocarbon dating.
(or)
b. Write an account kinds of fossil.

PART - C (3 X 10 =30)

ANSWER ANY THREE QUESTIONS

16. Discuss the Reimer's classification of Pteridophytes.
17. Explain the characters of pteropsida.
18. Explain the classification of Gymnosperms by Sporne (1965).
19. Give a detailed account on Economic importance of Gymnosperms.
20. Write an essay on Indian contribution towards fossil resources.
