

1B5N21135

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Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Botany Degree Examination, November 2021

BBT5B06 – Gymnosperms, Paleobotany, Phytogeography & Evolution

(2019 Admission onwards)

Time: 2 hours

Max. Marks: 60

SECTION A

(Answer all questions, each question carries 2 marks. Ceiling :20 Marks)

1. What are Protenoids?
2. Differentiate between manoxylic and pycnoxylic wood.
3. What are “Bars of Sanio”? Where do you find them?
4. How does Palaeobotany help in the exploration of fossil fuels?
5. Give an account of allopatric speciation
6. Explain the structure of male flowers in *Gnetum*
7. Explain Vicarism.
8. Point out any four differences between Gymnosperms and Pteridophytes
9. Explain Genetic drift.
10. What are neo-endemics? Give example.
11. Describe age and area hypothesis
12. What are the factors effecting fossilization?

SECTION B

(Answer all questions, each question carries 5 marks. Ceiling :30 Marks)

13. Explain the concept of Darwinism. What are various objections against Darwinism.
14. Describe the different types of continuous distribution of plants.
15. What are the morphological and anatomical evidences of organic evolution?
16. Write a short note on the economic importance of Gymnosperms. Give examples.
17. Explain different types of fossils.
18. Explain the evidences that support Continental drift hypothesis.
19. With the help of a neat diagram explain the internal structure of *Pinus* needle

SECTION C

(Answer any ONE question, each question carries 10 marks. 1 x 10 = 10 Marks)

20. Compare the reproductive structures of *Cycas* and *Pinus* and add a note on how megasporophyll of *Cycas* is different from that of *Pinus*.
21. Write an account of geological timescale, mentioning different plant groups prevailed in each geological time.

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Botany Degree Examination, November 2021**BBT5B07 – Angiosperm Morphology & Systematics**

(2019 Admission onwards)

Time: 2 hours

Max. Marks: 60

SECTION A**(Answer all questions, each question carries 2 marks. Ceiling: 20 Marks)**

1. Write the principles of ICN.
2. What are the floral characters of Papilionaceae.
3. Differentiate between helicoid and scorpioid cyme inflorescences.
4. Explain how to construct a dichotomous indented key?
5. Write a short note on caruncle and its significance.
6. Enumerate the contributions of William Roxburgh.
7. Explain the characters of essential whorls in the family Cucurbitaceae.
8. What is meant by didynamous condition? Where can you find this?
9. Distinguish between monograph and revision.
10. Give the binomials of any two economically important plants in the family Annonaceae.
11. Describe cyathium with an illustration.
12. What are albuminous and exalbuminous seeds. Give examples.

SECTION B**(Answer all questions, each question carries 5 marks. Ceiling: 30 Marks)**

13. Explain cytotaxonomy and its significance.
14. Briefly explain herbarium preparation and maintenance.
15. Give a brief account on Typification and its types.
16. Explain the merits and demerits of Bentham and Hooker system of classification.
17. Describe the adaptations in the dispersal of fruits and seeds.
18. Explain the different types of racemose inflorescences with examples.
19. What are the diagnostic features of the family Apocynaceae.

SECTION C**(Answer any one question, each question carries 10 marks. 1 x 10 = 10 Marks)**

20. Write an essay regarding the characters of the family Asteraceae. Give binomials of any two economically important plants. What are the advanced features in this family?
21. Write an account on the various types of fruits in angiosperms, with suitable examples.

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Fifth Semester B.Sc Botany Degree Examination, November 2021

BBT5B08– Tissue Culture, Horticulture, Economic Botany & Ethnobotany

(2019 Admission onwards)

Time: 2 hours

Max. Marks: 60

SECTION A

Answer all questions, each question carries 2 marks, Ceiling : 20 marks

1. What is indirect regeneration?
2. Define competency.
3. Who is the father of plant tissue culture ?
4. Name a commonly used nutrient media and state a reason for its being the most used.
5. What is meant by somatic hybridization?
6. What are the different classes of seeds during seed certification?
7. What are the basic aspects of post harvest management of vegetables?
8. What are the components of a garden?
9. State a few principles of indoor gardening.
10. Name the different common styles of bonsai preparation.
11. Write the botanical name, family and morphology of the useful part of Coir.
12. Name the major tribes of South India.

SECTION B

Answer all questions, each question carries 5 marks, Ceiling : 30 marks

13. What are the aseptic techniques adopted for maintaining sterile conditions in tissue culture
14. What is a synseed? Explain the preparation methods and advantages of synseeds
15. What are secondary metabolites and how are they produced?
16. What is seed dormancy. Describe the causes and advantages of it?
17. Explain the different categories of gardening tools based on their function.
18. Give an account of the botanical details of various spices studied.
19. Describe the plants commonly used in tribal medicine.

SECTION C

Answer any one question, each question carries 10 marks, 1 x 10 = 10 marks

20. Describe the various applications of plant tissue culture.
21. What are the methods for vegetative propagation of horticulturally important plants?
Describe citing few examples of crops in which they are practiced.

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Botany Degree Examination, November 2021

BBT5B09– Cell Biology & Biochemistry

(2019 Admission onwards)

Time: 2 hours

Max. Marks: 60

SECTION A

(Answer all questions, each questions carries 2 marks. Ceiling: 20 Marks)

1. Differentiate between Prokaryotic and Eukaryotic cells.
2. What are endoplasmic reticulum ?
3. What is glycerol?
4. What are the major functions of Chloroplast ?
5. What is ATP ?
6. Write about the classification of chromosomes based on Centromere.
7. What are Co-enzymes
8. What are the major functions of Vacuoles ?
9. Write about the ecological importance of Secondary Metabolites ?
10. Differentiate between Euploidy and Aneuploidy.
11. Explain the classification of Carbohydrates ?
12. Write about the biological functions of proteins.

SECTION B

(Answer all questions, each questions carries 5 marks. Ceiling: 30 Marks)

13. Draw and explain the structure of Mitochondria
14. Write about the morphology of chromosome
15. Describe the structure of glycerol
16. Explain about the Nucleosome model of chromatin
17. What is amino acids. Draw the general structure of amino acids.
18. Describe about the major differences between Mitosis and Meiosis
19. Write about the classifications of enzymes

SECTION C

(Answer any one question, each question carries 10marks. 1 x 10=10 Marks)

20. Explain about the structural aberrations of Chromosomes.
21. Explain about the primary, secondary and quaternary structure of proteins.

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Botany Degree Examination, November 2021**(Open Course)****BBT5D02– Applied Botany**

(2019 Admission onwards)

Time: 2 hours

Max. Marks: 60

SECTION A**(Answer all questions, each question carries 2 marks: Ceiling: 20 marks)**

1. What is a complex fertilizer? Give an example.
2. Write the role of humus in plant nutrition.
3. Name two common vegetative propagation methods in Rose.
4. What is seed dormancy? Add a note on its significance.
5. What is an explant?
6. Mention any two biopesticides.
7. Write about a seed treatment method to promote seed germination.
8. What is vermiwash?
9. Write the binomials of Coffee and Ginger.
10. Give the role three macronutrients essential for plant growth.
11. What are biofertilizers?. Write one example.
12. Define callus.

SECTION B**(Answer all questions, each question carries 5 marks: Ceiling: 30 marks)**

13. Briefly explain the cultivation method of Orchids.
14. Discuss the advantages of drip irrigation over spray and surface irrigations.
15. Give an account of soil texture.
16. Distinguish between patch budding and air layering.
17. With the help of a diagram explain the technique of potting.
18. Discuss the role of micropropagation in horticulture.
19. Write the binomials family and morphology of useful parts of any two medicinal plants.

SECTION C**(Answer any one question, each question carries 10 marks: 1x10 =10 Marks)**

20. Give an account of various types of organic manures. Add a note on their significance.
21. Briefly explain the method of mushroom cultivation.