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1B5N17150

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Reg. No:.............................
Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fifth Semester Botany Degree Examination, November 2017
BOT5B05T – Gymnosperms, Paleobotany, Phytogeography & Evolution
(2015 Admission onwards)

Max. Time: 3 hours

Max. Marks: 80

PART A
(Answer all the questions)

1. Ploidy level of Gymnosperm endosperm is _____

2. In *Cycas* leaflet lateral conduction facilitates through _____ tissues

3. In Gymnosperms winged pollen grains are found in _____

4. Which era is also known as the 'age of Cycads'?

5. Name the fructification of *Lepidodendron*

6. Name the super ocean that surrounded the Pangaea

7. The bacteria which thrive in salt concentrations are called as _____

8. First formed clusters of membrane bounded organic molecules are called _____

9. Study of ancient life based on fossil records are known as _____

10. As per Lamarckism major mechanism behind the evolution is _____

(10 x 1= 10 marks)

PART B
(Answer all questions)

11. Distinguish Sympodial and Monopodial growth in *Cycas*.

12. Differentiate Manoxylic and Pycnoxylic wood in Gymnosperms

13. What is 'Bars of Sanio'?

14. State the affinities of *Gnetum* with Angiosperms?

15. Commenton the contributions of Prof. BirbalSahni.

16. Write short notes on the patterns of plant distribution.

17. What is Vicarism?

18. What is meant by land bridge hypothesis?

19. Distinguish Allopatric and Sympatric species.

20. What is genetic drift?

(10 x 2=20 marks)

PART C
(Answer any six of the following)

21. What are Girdle traces?

22. Compare and illustrate ovules of *Cycas* and *Gnetum*.

23. Give an account of different types of fossils.

24. With the help of necessary diagrams explain the structure of *Rhynia*.

25. Describe different types of endemics

26. What do you understand by continental drift theory?

27. Briefly explain the morphological evidences of organic evolution.

28. Describe Darwin's theory on evolution of species.

(6 x 5 = 30 mar

PART D
(Answer any two of the following)

29. Diagrammatize and explain. Sporne's system of classification.

30. With the help of a diagram describe various Phytogeographical zones of India.

31. Describe Oparin concept on the origin of life?

(2 x 10 = 20 mar

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester Botany Degree Examination, November 2017

BOT5B06T – Angiosperm Morphology & Systematics

(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART - A
Answer *all* questions. Each question carries *one* mark

1. .... coined the term Herbarium.

2. .... acted as the leader of APG.

3. Write briefly on salient features of gynoecium of Liliaceae.

4. What is IPNI?

5. What is OUT Group?

6. Describe the use of *et* and *ex*?

7. What is Velamen root?

8. What is caruncle?

9. Write the Floral formula of Hibiscus.

10. Differentiate acute and acuminate leaf tips.

(10 x 1 = 10 Marks)

PART - B
Answer *all* questions. Each question carries *two* marks

11. Briefly discuss the concept of conservation of species names.

12. What is Author citation. Cite its significance.

13. What is Monograph?

14. Write a brief note on Index Herbariorum.

15. Write briefly on the significance of Botanical Gardens.

16. What is Cytotaxonomy. Cite one example.

17. What is floral diagram? Discuss its significance.

18. Write a note on Storage roots.

19. Write on albumonos and exalbuminous seeds, citing examples.

20. What are multiple fruits?

(10 x 2 = 20 Marks)

PART - C
Answer any six questions. Each question carries five marks

21. Write a brief account on the features of Asteraceae.

22. Write a note on classification by Hutchinson.

23. Write note on Keys for plant identification.

24. Write brief accounts on the contributions of J.S. Gamble and Robert Wight.

25. Write notes on Coenanthium and Cyathium.

26. Write note on Simple types of fruits.

27. Compare the plan of monocot and dicot flowers?

28. Write an account on the salient features of fruits and seeds dispersed by wind?

(6 x 5 = 30 Marks)

PART – D
Answer any two questions. Each question carries ten marks

29. Describe the features of Leguminosae. Compare its subfamilies.

30. What are the principles of ICBN? Discuss the major concepts of Code.

31. Write an account on different types of inflorescence.

(2 x 10 = 20 Marks)

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Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester Botany Degree Examination, November 2017

BOT5B07T – Embryology, Palynology, Economic Botany, Ethnobotany & Horticulture

(2015 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

Part-A
(Answer all questions)

1. What is exalbuminous seed?

2. What is sprinkle irrigation?

3. The study of fossil pollen is known as..

4. Binomial of cinnamon.

5. What is chalazogamy?

6. The cultivation of fruit crops is known as.............................

7. What is amphitropous ovule?

8. Name a biopesticide.

9. The ovule with two integuments is known as ....

10. Define ethnobotany?

(1 x 10 = 10 Marks)

Part-B
(Answer all questions)

11. Write a short note on egg apparatus.

12. Write binomial and family of two timber yielding plants.

13. Give an account on the biological methods to control the diseases in horticultural crops.

14. What is pollenkitt? Mention its function.

15. Comment on ethnobotanical importance of *Trichopus zeylanicus*.

16. Write a short note on organic fertilizers.

17. What is NPC system?

18. What is landscaping?

19. Comment on the methods to test the viability of seeds.

20. What is polyembryony? Give an example.

(10 x 2 = 20 Marks)

Part-C
(Answer any six of the following)

21. Briefly explain the different types of irrigation methods used for the cultivation of horticultural crops.

22. Write an account on the major tribes of south India.

23. Briefly explain the structure of male gametophyte.

24. What is indoor gardening? Briefly explain about indoor gardening.

25. Briefly explain the detailed structure of pollen wall.

26. Give an account on the types of apomixis. Mention its significances.

27. What is bonsai? Briefly explain the steps for making bonsai?

28. Write binomials, families and morphology of the useful parts of the following.

    a. coffee   b. tobacco

(6 x 5 = 30 Marks)

Part D
(Answer any two of the following)

29. Write an essay on the types of embryosac formation found in angiosperms with the help of suitable diagrams.

30. Give an account on the types of artificial vegetative propagation.

31. Write an account on the steps involved in the cultivation of edible mushrooms.

(2 x 10 = 20 Marks)

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Part-A
(Answer all questions)

1. Expand INFLIBNET

2. Expand URL

3. Name a chemical used for inducing fusion of protoplasts.

4. Define electroporation.

5. The region of Ti plasmid transferred into plant cells is called _____.

6. Who is regarded as father of plant tissue culture?

7. Fragments of lagging strand are called _____.

8. Mutations which cause numerical changes in chromosomes are called_____.

9. Genes which are constantly expressed in living cells are called_____.

10. The term used to refer unit of recombination is _____.

(1 x 10= 10 marks)

Part-B
(Answer all questions)

11. What is Boolean searching?

12. Describe green computing.

13. What is bio-computing?

14. Write a note on molecular glue.

15. What is embryo culture? What are the applications of this technique?

16. Write a note on cell immobilization.

17. What are edible waxins?

18. Explain one cistron – one polypeptide hypothesis.

19. Explain the concept of colinearity.

20. What is teminism?

(10 x 2 = 20 marks)

Part-C

(Answer any six of the following)

21. Write notes on a) Artificial intelligence b) virtual reality.

22. Briefly explain southern blotting technique.

23. What is Genetic code? Describe its characteristics.

24. Briefly explain molecular mechanism of DNA Replication.

25. Describe the structure and types of RNA molecules.

26. Describe the application of IT in a) weather forecasting b) education.

27. Explain the method and Applications of somatic embryogenesis and synthetic seed production

28. With suitable examples explain how biotechnology has been applied for a) Bioremediation b) Reduce post-harvest loss.

(6 x 5 = 30 marks)

Part D

(Answer any two of the following)

29. Describe the tools used in recombinant DNA technology.

30. Explain the various steps in translation.

31. Describe the major findings and relevance of Human and *Arabidopsis thaliana* genome projects

(2 x 10 = 20 marks)

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fifth Semester Botany (Open Course) Degree Examination, November 2017
BOT5D02 – Applied Botany
(2015 Admission onwards)

Max. Time: 2 hours   Max. Marks: 40

Part A
Answer all questions

1. ------------- is the method for determining the fertility status of soils.
2. --------------- is the production of miniature plantlets.
3. ------------ and -------------are the scientific names of Green gram and Bengal gram.
4. -------------- is the propagation method adapted for rubber.
5. -------------- is the staple food of India.

                                                          (1 x 5 = 5 Marks)

Part B
Answer all questions

6. Define top dressing?
7. What is exclusion?
8. What is fertigation?
9. Write the Binomial, family and morphology of the useful part
   a)Cotton   b) Coir
10. Define somatic embryogenesis?

                                                          (2 x 5 = 10 Marks)

Part C
Answer any three of the following

11. Give an account of the physical properties of soil?
12. Explain the advantages and disadvantages of in vitro propagation?
13. Write the binomial, family and morphology of the useful part of Tea and Rosewood.
14. Describe the importance of sprinkler irrigation?
15. Enumerate the importance of spices like cardamom and ginger

                                                          (3 x 5 = 15 Marks)

Part D
Answer any one of the following

16. Explain the various steps involved in mushroom cultivation
17. Give an account of Bio fertilizers and what are the methods adopted for its application
                                                          (1 x 10 = 10 Marks)