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(Pages : 2)

Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Second Semester B.Sc Botany Degree Examination, March 2018
BBOT2B02 – Research Methodology & Micro technique
 (2017 Admission onwards)

Max. Time: 3 hours

Max. Marks: 80

Part A
(Answer all questions)

1. Name the data, which are collected from any published article.
2. The force acting on the samples during centrifugation
3. Write an equation for chi-square test
4. Name any reagent, which is used for killing and fixing
5. Which is the most convenient method in serial sectioning.
6. Ag-AgCl electrode is an example for.....
7.changes litmus from blue to red
8. Write any example for buffer
9. Name any mounting medium used in permanent mounting
10. What is TEM?

(10 × 1= 10 marks)

Part B
(Answer all questions)

11. Distinguish between simple and complex hypothesis?
12. Write the disadvantages of census methods in statistical analysis
13. What are histograms?
14. Comment on scientific journals and impact factors
15. What is staining? Elucidate different kinds of stains
16. Comment on natural dyes with suitable examples?
17. What is maceration?
18. Distinguish positive and negative co-relation
19. Comment on applications of spectrophotometers
20. What is photomicrography

(10 × 2= 20 marks)

Part C

(Answer any six of the following questions)

21. Explain various types of hypothesis
22. Explain various components in scientific articles
23. Explain laws of probability: Addition theorem vs multiplication theorem
24. Discuss the regression analysis
25. Significance of buffers in biological studies
26. Explain Colourimetry, principle and its working procedure
27. Distinguish between TEM and SEM
28. Explain brief account on whole mounting **(6 × 5= 30 marks)**

Part D

(Answer any six of the following questions)

29. Write an essay on p^H scale, p^H meters and their measurements,
30. Write an essay on research report writings, biological journals, impact factors
31. Discuss various killing and fixing agents with suitable examples **(2 × 10= 20 marks)**

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Second Semester B.Sc Botany Degree Examination, March 2018
BBOT2C02 – Cryptogams, Gymnosperm & Plant Pathology
 (2017 Admission onwards)

Max. Time: 3 hours

Max. Marks: 64

PART A
(Answer all questions)

1.is an aquatic species of *Riccia*.
2. Polar nodules are seen in theof Cyanophyceae.
3. *Polysiphonia* belongs to the class.....
4. Leaf mosaic of tapioca is caused by.....
5. Coralloid roots are seen in.....
6.is an example of RNA virus.
7.is the enlarged swollen basal part of ligule.
8. The colour of the red sea is due to.....
9. Sterile conceptacle in *Sargassum* is known as.....
10. Vascular cryptogam is an alternative name for.....

(10×1=10 Marks)

PART B
(Answer any seven questions)

11. Economic importance of lichens
12. Explain the control measures of Blast of Paddy.
13. Scales and rhizoids in *Riccia*.
14. Endemic disease.
15. Viroids and prions
16. Usefulness of Viruses.
17. Structure of antheridium and oogonium in *Sargassum*
18. Write on Archaeobacteria.
19. Salient features of Basidiomycotina.
20. Heterospory and seed habit in Pteridophyte.

(7×2=14 Marks)

PART C

(Answer any six questions)

21. Briefly explain the multiplication cycle of bacteriophages.
22. Briefly mention the structure of bacterial cell.
23. Write a note on the sexual reproduction in *Spirogyra*.
24. List out the economic importance of *Fungi*.
25. Describe the internal structure of the thallus of *Riccia*.
26. Give the structure of microsporophyll and ovule of *Cycas*.
27. Give the structure of male and female gametophytes in *Selaginella*
28. Write a brief account on the symptoms, causal organism and control measures of Citrus canker.

(6×4=24 Marks)

PART D

(Answer any two questions)

29. With the help of diagrams, explain the life cycle of *Puccinia*.
30. Describe the life-cycle of *Polysiphonia* with suitable labelled diagram.
31. Write an essay on the sexual reproduction in bacteria.

(2×8=16 Marks)