

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
**Second Semester B.Sc Botany Degree Examination, March 2017**  
**BOT2B02T – Core Course II : Research Methodology & Micro technique**  
 (2016 Admission onwards)

Max. Time: 3 hours

Max. Marks: 80

**Part A (answer all questions)**

- Chi- square is used to test a -----
- In gas chromatography, the mobile phase is-----
- Knowledge acquired by practical experience is called -----
- is an example of a mounting medium.
- Carmine is obtained from -----
- Name a fixative.
- What is a buffer?
- What is Poisson distribution?
- What is the principle of micrometry?
- What is an ogive?

(1 x10= 10 Marks)

**Part B (answer all questions)**

- Differentiate between maceration and smear preparation.
- Briefly discuss the principle and merits of a phase contrast microscope.
- What is a biased observation?
- What are the different types of sampling methods?
- What is science?
- What are the optical components in a compound microscope?
- What is the difference between killing and fixing?
- Name any four eminent online science journals.
- What are the things to be remembered while you prepare a bibliography?
- Hand sectioning vs. microtome sectioning.

(10 x 2 =20 Marks)

**Part C (answer any Six questions)**

- Describe microtomy.
- What are the different ways to represent data?
- Give a general account of staining and its importance.
- Briefly describe the principle and working of TEM &SEM.
- Explain the working of camera Lucida.
- How can you prepare solutions of known concentration using pure samples?
- Briefly discuss the principle and working of calorimeter.

(6 x 5=30 Marks)

**Part D (answer any two questions)**

- Describe the different steps in paraffin method of permanent slide preparation.
- What is measure of dispersion? Explain different measures of dispersion with examples.
- What is the principle of chromatography? Explain different types with suitable diagrams if necessary.

(2 x10=20 Marks)

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(Pages : 2 )

Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
 Second Semester B.Sc Zoology Degree Examination, March 2017  
 BOT2C02T – Cryptogams, Gymnosperm & Plant Pathology  
 (2016 Admission onwards)

Time: 3 hours

Max. Marks: 64

**Part A (Answer all questions)**

- What is hormogonia?  
..... is the reserve food material in *Nostoc*.
- What is exogenote?
- Azetobacter is a Gram ..... bacteria
- Antherozoids in Selaginella are ..... flagellated.  
a) multi                    b) bi                    c) uni    d) non
- Banana Bunchy Top Virus is .....
- a) RNA single stranded    b) RNA double stranded    c) DNA single stranded    d) DNA double stranded
- What are Prions?
- Name the lichen known as Reindeer moss.
- What is apospory?
- Causative organism of Citrus canker is .....

(10 x 1=10 marks)

**Part B (Answer any 7 questions)**

- Explain scalariform conjugation in *Spirogyra*.
- Describe the structure of carpogonium?
- Name the characterestic biloproteins present in Cyanophycean members.
- List out four salient features of Ascomycotina.
- Briefly describe four salient features of Bryophytes.
- Write a brie note on female gametophyte of Selaginella.
- Briefly describe the structure of archeonium in *Cycas*.
- Write a brief note on methods of Biological control.
- What are the symptoms of Blast of paddy
- What are the control measures of Leaf Mosaic disease of Tapioca?

(7 x 2 = 14 marks)

**Part C (Answer any 6 questions)**

21. Describe the structure of Tobacco Mosaic Virus
  22. Write a brief note on transformation.
  23. Describe the structure of *Nostoc*.
  24. Write a brief note on the structure of male cone in *Cycas*.
  25. Write a note on the reproduction in Pteridophytes.
  26. Describe the structure of rhizophores in *Selaginella*.
  27. Write a brief note on the thallus structure of *Usnea*.
  28. Write a brief account on the pathogen, symptoms and control measures of Citrus canker.
- (6 x 4 = 24)

**Part D (Answer any two questions)**

29. Describe the thallus structure and reproduction in *Riccia*.
  30. Write an account on the ultra structure of Bacteria.
  31. Write an account on the thallus structure and reproduction in Sargassum.
- (2 x 8 = 16)