Model Question Paper

UNIVERSITY OF KERALA

Fifth Semester B.Sc. Degree Programme in Botany (CBSS)
Practical Examination January, 2018
Botany Core Practical I - Course Code: BO 1544
Angiosperm Anatomy, Reproductive Botany and Palynology,
Methodology and Perspectives in Plant Sciences,

Time: 3 Hours  Max. Marks: 80

1 Make suitable micro preparation of A, identify giving reasons and describe its structure with the help of labelled diagrams. Leave the preparation for valuation.
   (Preparation – 4, Diagram – 4, Identification -1, Reasons- 3)  12 marks

2 Construct a frequency table (Discrete / Continuous) from the given data B
   (Frequency table – 6)  6 marks

3 Construct histogram/bar diagram from the data /or / Work out the problem C
   (Histogram/Bar diagram – 6 /or / For problem, Calculation- 4, Result - 2)  6 marks

4 Identify the instruments/separation method D. Comment on its aim and working/procedure.
   (Identification – 1, Aim – 1, Working / Procedure – 3)  1 x 5 = 5 marks

5 Comment on E and F
   (Major group – 1, Identification – 1,)  2 x 2 = 4 marks

6 Make suitable micro preparations of G, identify giving reasons and describe its structure with the help of labelled diagrams. Leave the preparation for valuation.
   (Preparation – 4, Diagram – 4, Reasons- 3, Identification -1)  12 marks

7 Identify the type of stomata in specimen H
   (Identification- 1, Diagram – 2, Reason - 2)  5 marks

8 Identify and describe the type of cellular inclusion in specimen I
   (Identification- 1, Description-2, Diagram - 2)  5 marks

9 Identify J and draw a neat labelled diagram
   (Identification- 1, Diagram – 4)  5 marks

10 Record (Content – 15, Neatness - 5)  20 marks
Botany Core - Course Code: BO 1544

KEY TO SPECIMENS – PRACTICAL I

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| 1 | A | Primary/Normal Secondary Root or Stem  
(Avoid Primary Dicot Root) |
| 2 | B | Numerical data |
| 3 | C | Frequency table / Data (Mean, Median, Mode only) |
| 4 | D | pH meter/Colorimeter/Centrifuge/Spectrophotometer/
Paper chromatography/TLC preparation |
| 5 | E & F | Fixative, Stain, Mounting medium, Dissection/Compound Microscope, Microtome and Camera lucida mentioned in the syllabus |
| 6 | G | Stem with anomalous secondary structure (*Bignonia / Boerhaavia / Dracaena*) |
| 7 | H | Any type of stomata mentioned in the syllabus |
| 8 | I | Starch grain / Raphide /Cystolith / Aleurone grain etc mentioned in the syllabus |
| 9 | J | Anther T.S. / Dicot embryo L.S. /Monocot embryo L.S. |
UNIVERSITY OF KERALA

Fifth Semester B.Sc. Degree Programme in Botany (CBSS) Practical Examination January, 2018

Botany Core Practical II - Course Code: BO 1545

Microbiology, Phycology, Mycology, Lichenology, Plant Pathology, Bryology, Pteridology, Gymnosperms and Paleobotany

Time: 3 Hours Max. Marks: 80

1  Make suitable micro preparations to bring out the structure of A, B, C and D. Draw a cellular diagram of each and label the parts. Identify giving reasons and leave the preparation for evaluation.
   (Preparation – 2, Identification -1, Reasons- 2, Labelled diagram-2) 4 x 7 = 28 marks

2  Identify any two algal specimens from the mixture E, giving reasons
   (Identification – 1, Reasons -1, Diagram - 1) 2 x 3 = 6 marks

3  Perform the Gram staining of bacterial solution F and show the results. Write the procedure
   (Procedure - 3, Result- 1) 4 marks

4  Identify the disease in plant specimen G and give the name of the causative pathogen along with the important symptoms associated with it
   (Disease- 1, Pathogen -1, Symptoms -2) 4 marks

5  Spot at sight H, I, J, K, L and M
   (Genus name- 1, Part of the plant - 1, Major Group- 1) 3 x 6 = 18 marks

6  **Record to** be submitted for valuation
   (Content – 15, Neatness - 5) 20 marks
KEY TO SPECIMENS – PRACTICAL II
Course Code: BO 1545

1  A  Fungus mentioned in the syllabus
   B  Bryophyte mentioned in the syllabus
   C  Pteridophyte mentioned in the syllabus
   D  Gymnosperm mentioned in the syllabus

2  E  Algal mixture (Mixture of different algae prescribed in the syllabus containing at least four members. *Chlorella* and *Pinnularia* not to be included)

3  F  Bacterial solution

4  G  Plant disease mentioned in the syllabus

5  H  Alga (Macroscopic)
   I  Fossil form mentioned in the syllabus (Photograph / Slide)
   J  Lichen / Fungus (Macro / Micro)
   K  Bryophyte
   L  Pteridophyte
   M  Gymnosperm