SS – 363

V Semester B.Sc. Examination, November/December 2018
(CBCS) (2016-17 and Onwards) (F + R)
BOTANY (Paper – V)
Taxonomy and Economic Botany

Time : 3 Hours Max. Marks : 70

Instructions : *1) Answer **all** Parts.*
*2) Draw diagrams wherever **necessary**.*

PART – A

A. Explain/define **any ten** of the following in **two** or **three** sentences. **(10×2=20)**

1) What is biosystematics ?
2) What is cytotaxonomy ?
3) What is Herbarium ? Mention any two techniques.
4) Define pseudostem with an example.
5) What are epiphytic roots ? Give an example.
6) What are petalloid stamens ? Give an example.
7) What is obdiplostemonous condition ? Give an example.
8) What is synandrous condition ? Give an example.
9) Define pappus with an example.
10) What are interpetiolar stipules ? Give an example.
11) Give the economic importance of cinnamon and state the part used.
12) Write the botanical name of ground nut and coconut.

PART – B

B. Write critical notes on **any four** of the following. **(4×5=20)**

13) Floras and their importance.
14) Numerical taxonomy.
15) Salient features of arecaceae.
16) Cremocarp and regma.
17) Tetradynamous stamens.
18) Gynostegium and pollinia.

P.T.O.

PART – C

C. Give a comprehensive account on **any three** of the following. **(3×10=30)**

19) Bentham and Hooker system of classification.

20) Give an account of any two botanical gardens.

21) Give a comparative account of the families acanthaceae and lamiaceae.

22) Give an account of edible oils and any two beverages.

23) Enumerate the general characters of the family Magnoliaceae.

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V Semester B.Sc. Examination, November/December 2018
(CBCS) (2016 – 17 & Onwards) (F+R)
BOTANY (Paper – VI)
Molecular Biology, Genetic Engineering, Biotechnology and Plant Physiology

Time : 3 Hours | Max. Marks : 70

Instructions : *1) Answer **all** Parts.*
*2) Draw diagrams and write examples **wherever** necessary.*

PART – A

A. Explain/Define **any ten** of the following in **two** or **three** sentences. **(10×2=20)**

1) Define plasmid. What is its role in genetic engineering ?
2) What is gene regulation ?
3) Draw a neat labelled diagram of root hair.
4) Define water potential.
5) What is transpiration ? Mention any two types of transpiration.
6) Differentiate endosmosis and exosmosis.
7) What is water stress ?
8) Mention any two physical force theories of Ascent of sap.
9) What are terminator codons ? Name any one of them.
10) Draw a neat labelled diagram of Hydathode.
11) What are trace elements ? Give an example.
12) What is translocation of organic solutes ?

PART – B

B. Write critical notes on **any four** of the following. **(4×5=20)**

13) Types of cell membranes and their permeability.
14) With a neat labelled diagram, explain the structure of mRNA.
15) Role of microbes in industry.

P.T.O.

16) Brief account on Bioinformatics.

17) Factors influencing the rate of transpiration.

18) Radial conduction of water in roots.

PART – C

C. Give a comprehensive account of **any three** of the following. **(3×10=30)**

19) Explain active and passive mechanism of absorption of water in plants.

20) Describe the mechanism of semiconservative replication of DNA.

21) What is genetic code ? Explain the properties of genetic code.

22) Explain the mechanism of opening and closing of stomata.

23) Explain :

a) Mass-flow hypothesis

b) Any one vital theory of Ascent of sap.