SN – 370

V Semester B.Sc. Examination, November/December 2017
(CBCS) (2016-17 and Onwards) (F+R)
BOTANY (Paper – V)
Taxonomy and Economic Botany

Time : 3 Hours Max. Marks : 70

Instructions : *1) Answer **all** questions.*
*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 caryopsis ? Give an example.
2) What is Holotype ?
3) What is Ethnobotany ?
4) Define species.
5) What is Didynamous condition ? Give an example.
6) Write the Botanical names of Teak and Rosewood.
7) What is Resupination ? Give an example.
8) What are OTUs ?
9) What is Papilionaceous corolla ?
10) Differentiate Ray floret from Disc floret.
11) What is Phylogenetic system of classification ? Give an example.
12) Give any two diagnostic features of the family Apiaceae.

PART – B

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

13) Cyathium inflorescence.
14) Chemotaxonomy.
15) Tendrils of the family Cucurbitaceae.
16) Salient features of Bentham and Hooker's classification.
17) Floral characteristics of Musa sp.
18) Key characters of family Rutaceae.

P.T.O.

PART – C

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

19) Describe the family Asclepiadaceae.

20) Define Herbarium. Give an account of the Field and Herbarium techniques.

21) Give a comparative account of the families Annonaceae and Magnoliaceae.

22) What is Binomial Nomenclature ? Write a note on the aim and principles of ICBN.

23) Give a note on any five medicinal plants.

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V Semester B.Sc. Examination, November/December 2017
(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** questions.*
*2) Draw diagrams and write examples **wherever** necessary.*

PART – A

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

1) What is palindromic DNA ?
2) Define imbibition.
3) List any four functions of DNA.
4) What is active absorption ?
5) What is non-genetic RNA ?
6) Define osmosis. Give an example for semi-permeable membrane.
7) What is salt stress ?
8) What is a hydathode ? What is its significance ?
9) Mention any two differences between transpiration and evaporation.
10) What are restriction endonucleases ?
11) What is meant by source – sink concept ?
12) Mention any two minor elements in plant nutrition.

PART – B

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

13) Role of microbes in agriculture.
14) Plasmolysis and its significance.
15) Lac – operon.
16) Role of water in plants.
17) Antitranspirants.
18) B-DNA structure.

P.T.O.

PART – C

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

19) Explain the process of translation in protein synthesis.

20) Give an account of industrial production of penicillin.

21) What are macro elements ? Explain the deficiency symptoms of any four macro elements in plants.

22) Comment on physical force theories of ascent of sap with emphases on cohesion-tension theory.

23) Give an account of applications of genetic engineering in agriculture.