NS – 325

V Semester B.Sc. Examination, Nov./Dec. 2016
(CBCS) (2016-17 and Onwards) (Freshers)
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 Herbarium ?
2) What is paratype ?
3) What is natural system of classification ?
4) What is binomial nomenclature ? Who proposed it ?
5) Define compound umbel. Give an example.
6) What is tetradynamous condition ? Give an example.
7) What is labellum ? Give an example.
8) Differentiate legume with follicle.
9) Mention the botanical names of two aromatic plants.
10) What is parietal placentation ? Give an example.
11) What is syngenesious condition ? Give an example.
12) Differentiate between heterogamous and homogamous "Head".

PART – B

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

13) Salient features of Engler and Prantl system of classification.
14) Key characters of Family-Rubiaceae.
15) Botanical name, family, part used and uses of sesamum and asafoetida.
16) Ethnobotany.
17) Orchid flower.
18) Computer application in systematics.

P.T.O.

PART – C

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

19) Aim and principles of ICBN.

20) Give a comparative account of the families Acanthaceae and Lamiaceae.

21) Salient features of the family-Arecaceae.

22) Give an account of any five spice yielding plants.

23) Write the characters of the family-Rosaceae and add a note on any two economically important plants.

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V Semester B.Sc. Examination, Nov./Dec. 2016
(CBCS) (Freshers) (2016-17 and Onwards)
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** or **three** sentences. **(10×2=20)**

1) Define Osmosis. Mention its significance.
2) What is turgor pressure and wall pressure ?
3) What is Gene library ? Mention its significance.
4) What is meant by vein loading and unloading.
5) Differentiate transpiration and guttation.
6) What are exons and introns ?
7) Differentiate nucleocide and nucleotide.
8) Mention the types of membranes based on permeability.
9) What are molecular probes ? Where are they used ?
10) What is matric potential ? Give an example.
11) What is Genetic RNA ?
12) What is Chargaff's rule ?

P.T.O.

PART – B

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

13) Munch – Mass flow hypothesis.

14) Differentiate between DNA and RNA.

15) Explain different stages involved in penicillin production.

16) Lac-Operon concept.

17) Role of microbes in industries.

18) With a neat labelled sketch explain clover leaf model of t-RNA.

PART – C

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

19) Explain mechanism of opening and closing of stomata.

20) Explain the role of N,P,K and Mg in plant growth and development.

21) With a neat labelled diagram, explain Watson Crick model of DNA.

22) A brief account on Bioinformatics and its uses.

23) Explain physical force theories of ascent of sap.
