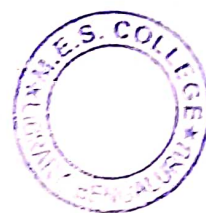




V Semester B.Sc. Examination, Nov./Dec. 2016
(CBCS) (2016-17 and Onwards) (Freshers)
BOTANY (Paper – V)
Taxonomy and Economic Botany



Max. Marks : 70

Time : 3 Hours

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.
-



NS – 327



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 ?



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.
-