2021

BOTANY

[HONOURS]

Paper : VII

Full Marks : 75 Time : 4 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP–A

(Taxonomy of Angiosperms)

(Marks : 40)

1. Answer any **five** questions: 2×5=10
   a) What is a monotypic family? Give example.
   b) What do you lnean by 'Rules of Priority'?
   c) What do you mean by'nomen nudum'?
   d) Define neotype.
   e) What do you mean by natural system of classification?
   f) What is anisophyly? Give an example.
   g) Define monographs. Give an example.
   h) Give the two importances of herbaria in the taxonomic study.

2. Answer any **four** questions from the following: 5×4=20
   a) Cytology and palynology have a great significance in taxonomic study-Justify with relevant examples. 5
   b) State the different 'types' that are used in taxonomy. State one condition for the rejection of names of plant as per ICN. 4+1
   c) State the salient features of the family 'Acanthaceae' with floral diagram. 5
   d) Orchidaceae is considered as most advanced among the monocots. Justify with suitable reasons. 5
   e) What are the roles of Botanical Gardens in taxonomy? 5
   f) State the salient features of the family Euphorbiaceae. Give two important medicinal plants from this Family. 4+1
3. Answer any **one** question from the following: 10×1=10
   a) Compare the diagnostic features between the families scrophulariaceae and verbenaceae. Mention two economic important plants from each family. 8+2
   b) What is Bessy's dicta? Mention its significance.Describe briefly the evolution of angiosperms with suitable examples. 2+2+6

GROUP - B
(Microbiology)
(Marks : 35)

4. Answer any **five** questions from the following: 2×5=10

   a) How does the cell wall Gram (+) differ to Gram (–) bacteria?

   b) What is botulism?

   c) What do you mean by diauxic growth?

   d) Draw a typical growth curve of bacteria in liquid culture.

   e) Define cyanophage.

   f) What are prions?

   g) Distinguish between Archaebacteria & Eubacteria.

   h) What is the difference between transformation and transfection?

5. Answer any **three** questions from the following: 5×3=15

   a) Describe the typical bacterial endospore with suitable diagram. 5

   b) State the different type of Plasmids in bacteria.Why it is used as vector in genetic engineering? 4+1

   c) State the role of bacteria in phatmaceutical industries.

   d) State the characters of Eubacteria' What is ELISA? 4+1

   e) What is Enter-Doudorf pathway? Explain with diagram. 1+4

6. Answer any **one** from the following: 10×1=10

   a) Describe lysogenic cycle in virus with suitable diagrams. 5+5

   b) Write short notes on:

      i) Transformation in bacteria 5

      ii) Mode of action of antibiotics as chemotherapeutic agents. 4+1

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