UNIVERSITY OF NORTH BENGAL

B.Sc. Honours Part-II Examination, 2020

BOTANY

PAPER-IV

Time Allotted: 2 Hours   Full Marks: 35

The figures in the margin indicate full marks.

1.   Answer any *six* of the following: 2×6 = 12

   (a) Mention the useful part and family of cotton.

   (b) Give the scientific name of Green gram (Mung) and Bengal gram (Chickpea).

   (c) What is niche?

   (d) What is detritus chain?

   (e) Mention two advanced features of Asteraceae.

   (f) What is Basionym?

   (g) Mention two diagnostic features of Araceae.

2.   Answer any *one* of the following: 16×1 = 16

   (a) Compare and contrast the different sub-families of Fabaceae (S.I.). Mention the economic importance of the family.   12+4

   (b) Describe the morphological, anatomical and physiological adaptation of Hydrophytes with diagrams. Write a note on ecotone.   4+4+4+4

   (c) Compare the classification of Bentham and Hooker with that of Engler and Prantl. Mention two merits and two demerits of each system.   12+4

   (d) Describe the phytogeographical regions of India according to D. Chatterjee (1960). Compare the vegetation characteristics of Eastern and Western Himalaya.   8+8

3.   Answer any *one* of the following: 7×1 = 7

   (a) Write short notes on the following: $3\frac{1}{2}$ +$3\frac{1}{2}$

      (i) Rule of Priority

      (ii) Numerical Taxonomy.

(b) Write the distinguishing features of the following pairs of families: $3\frac{1}{2}+3\frac{1}{2}$

   (i)   Ranunculaceae and Magnoliaceae

   (ii) Solanaceae and Rubiaceae.

(c) Write the scientific names and their respective families, usable parts and uses of the following: (any *two*) $3\frac{1}{2}+3\frac{1}{2}$

   (i)   Ipecac

   (ii) Arjun

   (iii) Opium

   (iv) Cardamom.

(d) Discuss various anatomical features as an aid to taxonomy.   7

(e) What is Energy flow of ecosystem? Describe the Nitrogen Cycle with suitable sketch.   2+5=7

—–×—–