

**2013**

**M.Sc.**

**2nd Semester Examination**

**BOTANY**

**PAPER—BOT-201**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

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

*Illustrate the answers wherever necessary.*

**(Taxonomy of Angiosperms and Biosystematics)**

*Answer all questions.*

1. Answer any ten of the following : 1×10
- (a) Define  $\alpha$ - and  $\beta$ -taxonomy.
  - (b) Define ecotype and cite an example.
  - (c) Who had establish the then East India Company's Botanic Garden at Sibpur ? What is the present name of this garden ?

*(Turn Over)*

- (d) Explain *nomen nudum*. Give an example.
- (e) What are sementides ?
- (f) Define hotspots. How many hotspots are present in India ?
- (g) Define lectotype.
- (h) Write the full form of IPI and TEM.
- (i) Write scientific names of two economic important plants belonging to the subclass Rosidae.
- (j) State the theme of Biodiversity Day for the year 2013.
- (k) Explain with example the phenotypic plasticity.
- (l) Write the full form of IAPT and mention its primary objective.
- (m) Define ITK.
- (n) Explain biosystematic phase.
- (o) Name one primitive living angiosperm. Who had discovered it and where from ?
- (p) Name the topmost megadiversity country of the world.

2. Write notes on any *two* of the following : 5×2

- (a) APG system of classification ;
- (b) *In-situ* and *ex-situ* Conservation ;

- (c) NPC system of classification ;
- (d) Branches and scope of ethnobotany ;
- (e) Rank of taxa.

3. Answer any *two* of the following : 10×2

- (a) Define phylogenetic system of classification. Give an outline of the classification of Angiosperms as provided by Cronquist (1988) upto subclasses. Write the merits and demerits of this system of classification. 1+5+2+2
- (b) Characterise the subclass Caryophyllidae. Mention the putative evolutionary relationships among the orders of this subclass. Justify the use of the term 'Centrospermae' for this subclass. 4+5+1
- (c) (i) Characterise the subclass Magnolidae and point out its primitive features.
- (ii) Characterise the subclass Lilidae and mention the range of floral characters of this taxon. 5+5
- (d) (i) State the importance of taxonomy in developing biodiversity inventory.
- (ii) Write the principles of ICN. 5+5