

**M.Sc. 3rd Semester Examination, 2018**

**BOTANY**

**Paper : BOT-304EA(T)**

**Taxonomy of Angiosperms and Biosystematics**

**Course ID : 31354**

**Time: 2 Hours**

**Full Marks: 30**

*The figures in the margin indicate full marks.*

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

**Group-A**

**(Taxonomy of Angiosperms)**

1. Answer *any two* of the following: 1×2=2
  - (a) Name two monotypic families of Trochodendrales.
  - (b) Write the name of the book with the year of publication of Arthur Cronquist in which he first presented his concept of classification.
  - (c) Name one typical xerophytic genus of Liliaceae.
  - (d) Cite one example of total root parasite and one stem hemiparasitic angiosperms.
  
2. Answer *any one* of the following: 5×1=5
  - (a) Circumscribe the subclass Rosidae. Why has Cronquist placed the subclass Rosidae and Dilleniidae apart? 3+2=5
  - (b) Write the salient features of Liliidae. How many orders and families are included under this subclass? 4+1=5
  
3. Answer *any one* of the following: 8×1=8
  - (a) Write the general features of the subclass Asteridae. Discuss the pattern of phylogenetic relationship within the subclass Asteridae with proper diagram. 3+5=8
  - (b) What are insectivorous plants? Give an account of any two insectivorous plants of India with their specializations for special modes of nutrition. 2+3+3=8

**Group-B**

**(Biosystematics)**

4. Answer *any two* of the following: 1×2=2
  - (a) What is microcentre of diversity?
  - (b) How many centres of origin were situated in the old world?
  - (c) What is sibling species?
  - (d) Define epigenetics.

- 5.** Answer *any one* of the following: 5×1=5
- (a) What is crop diversity? Explain briefly about the domestication of cultivated plants in the new world proposed by De Candolle. 2+3=5
- (b) What is isolation? Classify the different isolating mechanisms (After Levin, 1971). 2+3=5
- 6.** Answer *any one* of the following: 8×1=8
- (a) What is secondary centre of origin of crop plants? Discuss briefly about the origin of cultivated plants in different areas of the world. 2+6=8
- (b) What do you mean by abrupt and gradual speciations? Discuss different types of mechanism of speciation with examples. 2+6=8
-