M.Sc. 3rd Semester Examination, 2021

Subject: BOTANY **Course ID: 31354**

Course Code: 304EA(TH)

Course Title: Taxonomy of Angiosperms and Biosystematics

Full Marks: 30 **Time: 2 Hours**

The figures in the margin indicate full marks

Answer all the questions.

1. **Answer *any four* of the following questions:** **(1x4 = 4)**

a) Name an endemic saprophytic orchid of India.

b) What is paraphyly?

c) Mention the types of inflorescence in Arecidae

d) What is heterobathmy?

e) What is meant by uniparental species?

f) What is holomorph?

g) Write the centre of origin of rice?

h) Mention two Arecoid features of Pandanales.

2. **Answer *any two* of the following questions:** **(5x2 = 10)**

a) State the diagnostic features of Commelinidae of Cronquist and mention its systematic position. 3+2 = 5

b) What is speciation? Distinguish between abrupt and gradual speciation with examples. 2=3 = 5

c) What do you mean by the centre of origin of a species? Write the different criteria for postulating the centre of origin. 2+3 = 5

d) Characterige the subclass Caryophyllidae *sensu* Cronquist(1988). Why are Polygonales included in Caryophyllidae. 3+2 = 5

3. Answer *any two* of the following questions: (8x2 = 16)

a) Circumscribe Hamamelidae and discuss critically its phylogeny 5+3 = 8

b) Prepare a taxonomic account of Dilleniidae with a note on evolutionary trends.

5+3 = 8

c) Circumscribe Asteridae and discuss its phylogeny giving special emphasis on floral specialization. 4+4 + 8

d) Name four families of insectivorous plants. Describe the morphological specialization and insect trapping mechanism of any one insectivorous plant. State the distribution of this plant. 2+4+2 = 8