

P.G. Semester-IV Examination, 2023**BOTANY**

Course ID : 41352 Course Code : BOT-402C(TH)

Course Title : Plant Anatomy, Silviculture

Time : 2 Hours

Full Marks : 30

*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****(Plant Anatomy)**

1. Answer any **two** of the followings: $1 \times 2 = 2$
 - a) What is tylosis?
 - b) Define quiescent centre.
 - c) Distinguish between foraminate and scalariform perforation plates in vessels.
 - d) What is SE/CC complex?
2. Answer any **one** question: $5 \times 1 = 5$
 - a) Describe genetics of flower development with different models studied by you. 5
 - b) With diagram discuss the root apices of angiosperm. Distinguish between apotracheal and paratracheal axial parenchyma. $4+1$

3. Answer any **one** question: $8 \times 1 = 8$
 - a) Discuss the phylogeny of Tracheid. Describe *Cycas* type and *Ginkgo* type of shoot apex with proper diagrams. $2+3+3=8$
 - b) Discuss the ultra-structural features of sieve elements. Write about the genetic basis of plant morphogenesis. $4+4=8$

GROUP-B**(Silviculture)**

4. Answer any **two** of the following questions: $1 \times 2 = 2$
 - a) What is coppice?
 - b) Write the scientific name of khus-khus.
 - c) What is germination capacity?
 - d) Write the importance of cane plant.
5. Answer any **one** of the following questions: $5 \times 1 = 5$
 - a) Write a brief account on pest management in forest nursery and give some common examples of nursery pest. $4+1=5$
 - b) What is clear felling? Why does wastage of timber occur during felling? $2+3=5$

6. Answer any **one** of the following questions: $8 \times 1 = 8$

a) What are the animal products from forest? What are the tending operations? What is meant by sustainability in forestry and how it can be maintained? $3+2+3$

b) What is after ripening? What is shellac? Briefly describe the process of lac cultivation. $1+1+6$
