Assignment

Paper – Plant Systematics

1. Fill in the blanks:
   (i) Takhtajan represented his system of classification in the form of a .......... Diagram.
   (ii) APG stands for .......... 
   (iii) .......... has given sexual system of classification 
   (iv) .......... is known as the Father of Botany. 
   (v) Angiosperms were given the taxonomic rank of .......... by Cronquist

2. Differentiate between the following:
   (i) Natural and Artificial classification
   (ii) Taxonomic category and taxonomic group

3. What are secondary metabolites? Discuss their role in solving taxonomic problems citing suitable examples.

4. (i) Outline the system of classification proposed by Bentham and Hooker.
   (ii) Explain why this system is considered a major improvement over earlier systems.
   (iii) Explain the merits and demerits of Bentham and Hooker classification.

5. (i) Outline the system of classification proposed by Engler and Prantl.
   (ii) Discuss its merits and demerits.

6. Palynological information is considered reliable in establishing the evolutionary history of angiosperms. Discuss with the help of suitable examples.

7. What cytological data are used in plant systematics? Discuss their role in solving taxonomic problems with examples.

8. Explain the use of molecular data as a modern taxonomic tool with suitable analysis.

9. Name the authors who have used the following groups name in their classification:
   (i) *Ordines anomal* 
   (ii) Liliopsida 
   (iii) Magnoliopsida 
   (iv) Gamopetalae 
   (v) Heteromerae 
   (vi) Diandria 
   (vii) Embryophyta 
   (viii) Metachlamydeae
10. Write short notes on the following:
   (i) Biological species concept
   (ii) Taxonomic species concept
   (iii) Serology as a taxonomic tool
   (iv) APG (III) classification