

Mid-West University
Examinations Management Office
Final Examinations-2080

Bachelor level/ B. Sc. /2nd Semester

Time: 3 hours

Subject: Phanerogams (BOT421)

Full Marks: 60

Pass Marks:30

Candidates are required to give their answer in their own words as far as practicable. The figures in the margin indicate full marks.

Section A

Attempt all the long questions.

[4X8= 32]

1. Write an illustrated account of microgametogenesis and megagametogenesis in *Ephedra* with necessary diagram. **(3+5)**
2. Give an outline of classification system of Engler and Prantl. Write merits and demerits of it. **(5+3)**

OR

- Describe the family Orchidaceae in semi - technical terms with floral formula and floral diagram. Write any two economic importance of this family. **(4.5+1+1.5+1)**
3. Give an account of morphology and anatomy of needle of *pinus* with well labeled diagram. **(1+3+3)**
 4. Describe the family Lamiaceae in semi - technical terms with floral formula and floral diagram. Write any two botanical names of this family. **(4.5+1+1.5+1)**

Section B

Answer the questions in brief.

[7X3=21]

5. Describe the floral characteristics of Magnoliaceae.
6. Discuss the structure of ovule of *Cycas*.
7. Describe about the disc floret of family Asteraceae.
8. Give an outline of classification of gymnosperms.
9. Write down the merits and demerits of Bentham and Hooker's system of classification.
10. Discuss the evolutionary trends in reproductive structures of gymnosperms.

OR

- List out the principles and significance of plant systematic.
11. Write short notes on economic importance and distribution of *Pinus* in Nepal.

Section C

Answer any seven questions in very short.

[7x1=7]

12. Define zygomorphic flower.
13. Give any two economic importances of plants belonging to family Liliaceae with their botanical names.
14. Differentiate between manoxylic and pycnoxylic wood.
15. Give morphology of *Ephedra*.
16. Write down the floral formula of Rosaceae.
17. What is the significance of APG system of classification?
18. Mention the functions of cambium.
19. Mention the xerophytic characteristics of gymnosperms.
20. What do you mean by placentation? Also write its type.

The End