



FACULTY	AGRICULTURE, ENGINEERING & NATURAL SCIENCES		
DEPARTMENT	ENVIRONMENTAL SCIENCE		
SUBJECT	PLANT FORM AND FUNCTION		
SUBJECT CODE	BLG 3612		
DATE	OCTOBER/NOVEMBER 2021		
DURATION	3 Hours	MARKS	120

SUMMER TERM EXAMINATION

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This **Examination Paper** consists of four (4) (including the front page)

Instructions

- Answer **all** questions from Section A.
- Answer **only 1** question from Section B.
- Label all your answers appropriately and neatly.

UNIVERSITY OF NAMIBIA EXAMINATIONS

Section A

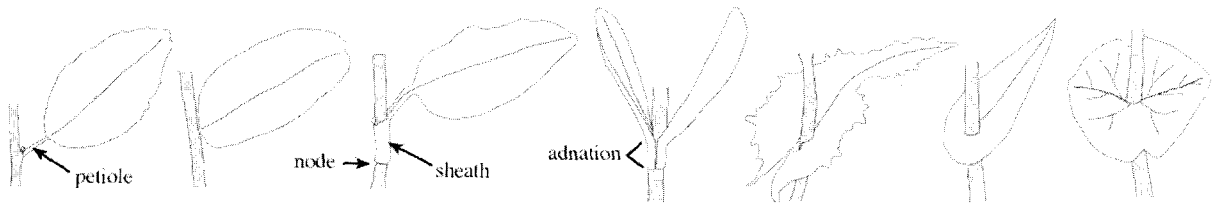
Answer all questions Section A (90 marks)

Question 1 (30 marks)

- a) Most seedless vascular plants follow a homosporous life cycle. Describe the term homosporous. (3)
- b) Distinguish between the following: (6)
- i. Monocotyledon and eudicotyledon
 - ii. Complete and incomplete flowers
 - iii. Monoecious and dioecious plants
- c) In the life cycle of a plant, there is an alteration of generations. Explain this term. (6)
- d) List two characteristics that are unique to each of the following groups of plants. (6)
(a) Cycads (b) Gingkoes and (c) Conifers
- e) Differentiate between sporophyte and sporophyll. (2)
- f) List two secondary meristems found in woody plants and the tissues do they produce.
- g) Differentiate between (a) bracts, (b) tendrils, and (c) trichome. (3)

Question 2 (30 marks)

- a) Briefly describe the term endodermis (3)
- b) Characterise root hairs and their functions. (7)
- c) Discuss the development of tracheids and vessels. (9)
- d) List the names of the different types of leaf attachments. (7)



- e) Leaf variation can be used to identify plant species. Please list how leaves can vary in shape and attachment. (7)

Question 3 (30 marks)

- a) Explain what endophytes are and which two benefits they provide to plants. (3)
- b) Describe what Ectomycorrhiza are and which type of fungi form these with plants. (3)
- c) List six characteristics of flowers that have co-evolved with bats as their pollinators. (6)
- d) Plants have a wide range of adaptation features. Describe the features that enable plants to survive in a desert environment. (10)
- e) Explain the ecological importance of Lichens. (6)
- f) List any two human uses of leaves. (2)

Section B: Essays Section

Answer only ONE question from this section

Question 1

Discuss the reproductive and non-reproductive flower structures and explain how sperm and eggs are produced in angiosperms. [30 marks]

Question 2

Discuss how plants are affected by the different hormones: Auxins, Cytokinins, Ethylene, Abscisic acid and Gibberellins. [30 marks]

The End