



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

REGULAR EXAMINATION

Examiners: Dr. W. C. Nesongano, Mr H. Eiman, Dr. L. Horn, Dr. C. Amoo , and Dr. D. Kavishe

Internal Moderator: Prof C. T. Downs (University of KwaZulu-Natal)

This **Examination Paper** consists of three (3) pages (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 in Section (90 marks)

Question 1 (30 marks)

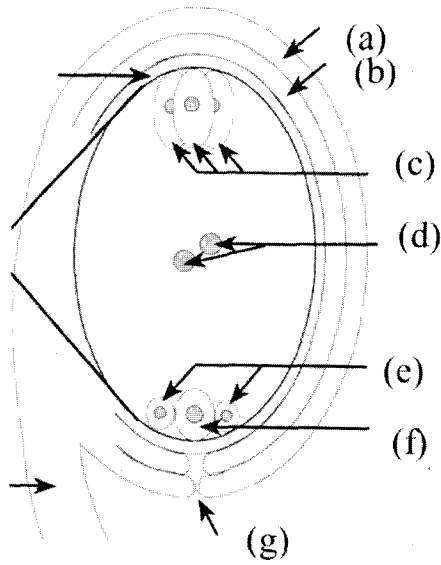
- (a) Explain the key characteristics of most plants. (3)
- (b) List any three evolutionary traits that enabled plants to become stabilised on land. (3)
- (c) List any two common traits of Gymnosperms and Angiosperms plants. (2)
- (d) Distinguish between the Bryophytes and Tracheophytes. (6)
- (e) List the four groups of diversity of land plants. (4)
- (f) Distinguish between the following: (6)
 - i. Monoecious and dioecious plants
 - ii. Perfect and imperfect flowers
 - iii. Superior and inferior ovary
- (g) Explain how perfect flowers plants avoid self-pollination. (6)

Question 2 (30 marks)

- (a) Using a table, compare and contrast the following: the stolon, tuber corm and tendrils. (7)
- (b) Provide six functions of the stem. (6)
- (c) Why can phloem sap travel through from one cell to another along the sieve tube? (2)
- (d) Using a table, compare and contrast the following: tap roots and fibrous root systems. (10)
- (e) Briefly explain the process of plant growth. (5)

Question 3 (30 marks)

1. Label the different parts (a-g) in the drawing below of a mature female gametophyte in flowering plants. Indicate the ploidy level of a, b and e. [10 marks]



2. (a) Mention two forms of pollination that you know? (2)
- (b) Outline the advantages and disadvantages of each pollination form you have mentioned above. (8)

Section B: Essays Section

Answer only ONE question from Section B

Question 1

Discuss how the movement of water, minerals and solutes occurs through the xylem.

[30 marks]

Question 2

Living organisms need to adapt to their environment in order to cope with conditions where they live or occur. Explain the different adaptations of plants in deserts like the Namib.

[30 marks]