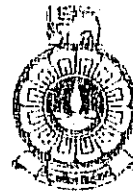


THE OPEN UNIVERSITY OF SRI LANKA
B.Sc. DEGREE PROGRAMME – 2004/2005
BOTANY –LEVEL 05
ASSESSMENT TEST II – (NO BOOK TEST)
BTU 3103/BTE 5103 – PLANT GROWTH AND DEVELOPMENT



DURATION : ONE (01) HOUR

Registration No.

DATE : 23rd February 2006

TIME: 4.00 p.m. – 5.00 p.m.

ANSWER ALL QUESTIONS ON THE SPACE PROVIDED.

(1). a) Plants are classified into three groups depending on their response to day length. Name these three groups and explain the basis of this grouping.

- i.
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- ii.
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- iii.
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b) Briefly explain the relationship between the critical night length of plants and the state of the phytochrome pigment.

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c) A plant species which is a short day plant with a critical night length of 15 hours, is cultivated for its flowers. Answer the following.

i. Name two environmental factors that would affect flowering of plants.

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ii. Giving reasons state whether the plants will flower or not when exposed to the following conditions.

| Conditions | Flowering/not flowering | Reasons |
|---|-------------------------|---------|
| * 16h of night period. | | |
| * 20h of night period but given a red light during this period. | | |
| * 10h of night and given a red light during this period. | | |

d) Define the following terms.

i. Vernalization

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ii. Reproductive photoperiodism

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iii. Vegetative Photoperiodism

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iv. Vernalin

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02. (a) What is meant by 'dormancy'?

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(b) Briefly describe the significance of dormancy among plants growing in arid regions.

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(c) Briefly explain the ways by which seed coat influences seed dormancy.

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(d) What is the possible survival value of seed dormancy?

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(e) Define the following terms.

i. Quiescence

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ii. Secondary dormancy

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iii. Rudimentary embryos

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v. Scarification

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