

THE OPEN UNIVERSITY OF SRI LANKA

B.Sc./B.Ed. DEGREE PROGRAMME 2010/2011

BOTANY –LEVEL 05

ASSESSMENT TEST –(OPEN BOOK TEST)

BTU 3103/BTE 5103 – PLANT GROWTH AND DEVELOPMENT



DURATION : ONE (01) HOUR

Reg. No.....

DATE : 19th September 2010

TIME: 4.00 p.m. – 5.00 p.m.

No of Questions - 03

No. of Pages: - 04

ANSWER ALL QUESTIONS ON THE SPACE PROVIDED.

01. Fill in the blanks with the most appropriate word/words.

- a) Indole – 3 acetic acid produced from the amino acid _____ is a natural auxin.
- b) Roots are _____ sensitive to auxin than stems.
- c) Most rosette plants _____ and flower when treated with GA.
- d) In germinating cereal grains, gibberellins produced by the _____ facilitates the mobilization of stored food reserves by increasing the synthesis and secretion of _____.
- e) Some seeds require low temperature before germination can occur. This is known as _____.
- f) Auxins and _____ have been found to cause parthenocarpic fruit development.
- g) Ethrel is an _____ releasing compound which is used in agriculture.

- h) ABA is generated in high concentrations during water stress of some plants. This induces _____ through K^+ loss from _____, thus preventing desiccation damage.
- i) A synthetic _____ 2, 4 – D is used as a selective herbicide.
- j) The only plant hormone that is a gas is _____.
- k) Polar auxin transport occurs through _____ in contact with the vascular bundles.
- l) Use of biological material to quantify a particular substance is known as _____.
- m) Gibberellin synthesis inhibitors are used to control _____ in cereals.
- n) Deactivation by converting to _____ is one way of regulating endogenous auxin levels in tissues.
- o) The _____ gets activated with a signal coming from hormonal changes and it is known as the senescence factor.
- p) _____ is used to increase the size and spacing in grapes.
- q) Two hormones which can be found in commercial rooting preparations are _____ and _____.

02. a) What are cytokinins?

b) Where in the plant might you find the highest level of cytokinin?

c) Why does coconut milk serve as a supplement for certain tissue cultures?

- d) List two(02) bioassays for cytokinins. What primary activity of cytokinins does each one exhibit?

- e) "Cytokinins play a major role in delay of senescence in aging plant tissues" Explain.

03. a) List three (03) plant responses that are influenced by ethylene.

- b) Fruits are categorized into two types according to the ripening process. What are they? Briefly explain the two types.

- c) Briefly describe the techniques used in storage of fruits and vegetables to prevent over ripening.

- d) Give two (02) commercial uses of ethylene.

- Copyrights reserved -