THE OPEN UNIVERSITY OF SRI LANKA

B.Sc/B.Ed./B.Ind.Tech. DEGREE PROGRAMME/DIPLOMA IN INDUSTRIAL STUDIES – 2004/2005

BOTANY –LEVEL 05

ASSESSMENT TEST I – OPEN BOOK TEST

BTU 3103/BTE 5103/BTI 5103 – PLANT GROWTH AND DEVELOPMENT

DURATION : ONE (01) HOUR

Registration No. .....

DATE : 29th January 2006 **TIME: 11.00 a.m. – 12.00 noon**

No. of Questions - 02
No. of pages. - 03

ANSWER ALL QUESTIONS ON THE SPACE PROVIDED.

01. a) Growth is an increase in the amount of _____ of an organism, generally accompanied by an irreversible increase in _____

b) Growth and development is a result of three simple events at the cellular level, cell division, cell enlargement and _____

c) Naturally occurring auxin was identified as IAA. In most plants it is synthesized from the amino acid _____

d) Auxin is synthesized in_____ tips and migrate polarly basipetally, facilitating cellular elongation below the apex inhibiting the growth of _____ _____.

e) Roots are _____ sensitive to auxin than stems.

f) Application of _____ on axillary buds stimulates bud growth in may species overcoming the inhibitory effect of the shoot apex.

g) Potato tuber dormancy can be broken by application of the hormone _____

h) Cytokinins are _____derivatives.

i) Most widely used ethylene-releasing compound in agriculture and horticulture is _____

j) Inhibitors of _____ biosynthesis such as sliver are used to increase longevity of cut carnations and several other flowers.

k) Most rosette plants _____ and flower when treated with GA.

l) In seeds, gibberellins produced by the _____ facilitates the mobilization of stored food reserves by increasing the synthesis and secretion of _____ _____

m) Formation of a broom like structure in fasciation disease is due to multiple _____ _____ growth promoted by cytokinin.

n) Proliferation and swelling of cells which is thought to be under the control of ethylene is known as _____

o) Positive geotropism in roots is under the control of _____

p) The hormone _____ can replace vernalisation.

q) Synthetic auxin analogues which have no auxin activity but inhibit the effect of auxin are known as _____

02. a) What is the role of ABA in controlling the rate of transpiration?

b) Briefly explain the involvement of ABA in plant bud dormancy and seed dormancy.

c) Give <u>two</u> ways by which the ABA level in plants is regulated.

i)

ii)

d) Give one application of ABA

e) Briefly describe the mode of action of ABA