

THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. DEGREE PROGRAMME- 2014/2015

BOTANY- LEVEL 04

BOU2200: PLANT PHYSIOLOGY

ASSESSMENT TEST 1 (NO BOOK TEST)

DURATION: ONE (01) HOUR



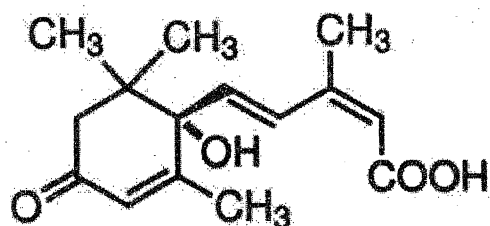
Registration No.

Date: 30/ 08/ 2015

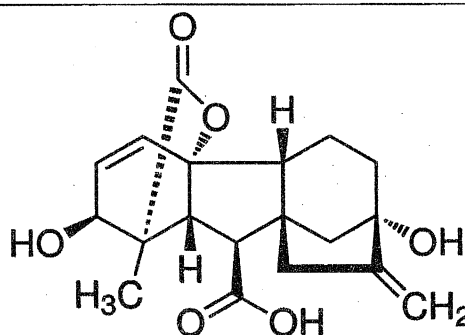
Time: 10.30 am -11.30 am

ANSWER ALL QUESTIONS IN THE SPACE PROVIDED

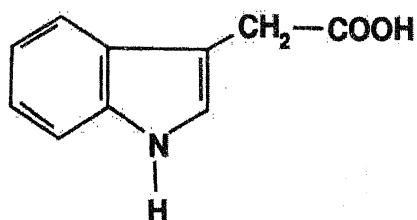
1. Following are the basic structures of 04 plant hormones. Write the names of A,B,C and D in the space provided.



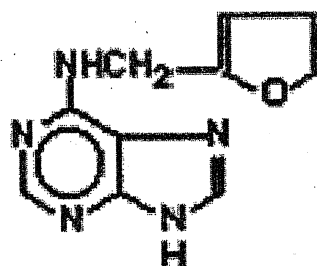
A



B



C



D

2. Gibberillic acid (GA) plays a vital role in seed germination.

Briefly discuss the role of GA in seed germination

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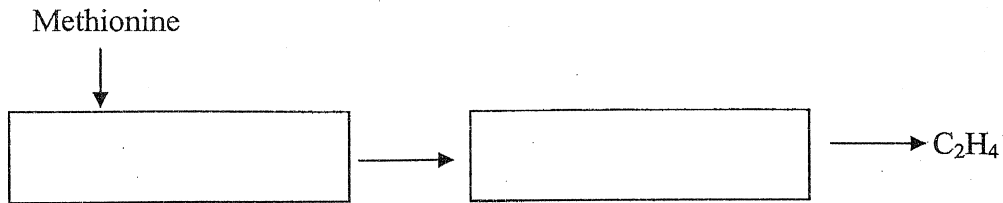
.....

3. Hormones are widely used in commercial applications of horticulture and agriculture.

Mention the hormones which are used in following processes

Commercial application	Hormone /s
Propagation of plants by cuttings	
Induce parthenocarpic fruit set	
Stimulate latex flow	
Induce bolting and flowering	
Increase the fruit size in grapes	
Organogenesis in tissue culture	
Act as herbicides	
Malting of barley	
Promoting fruit ripening	
Chemical thinning	

4. Fill in the blanks in the ethylene biosynthetic pathway given below



5. Describe the following observations

- a. *Sesbania* leaves show sleeping movements during dark

.....

.....

.....

.....

- b. Roots grows towards soil, while shoots grow against soil

.....

.....

.....

.....

.....

- c. In higher plants, the growing apical buds inhibit the growth of lateral buds

.....

.....

.....

.....

6. Give one example for the each group given below

Group	Example
Short day plant	
Long day plant	
Day neutral	

7. a. What are the 02 forms of phytochrome ?

.....

- b. Discuss the involvement of the 02 forms of phytochrome pigment, on flowering in short day and long day plants

.....

8. What are the receptor organs of following phenomena

Phenomenon	Receptor organ
Photoperiodism	
Vernerlization	

9. List the changes that take place in a plant tissue during the senescence process (with respect to leaves)

- 1.....
- 2.....
- 3.....
- 4.....

10. Mention 02 ways, by which water stress reduces the rate of photosynthesis

-
-
-

11. Define the following terms

(a) Halophytes

.....

(b) Glycophytes

.....

(c) Imposed dormancy

.....

.....

(d) Vernerlization

.....

(e) Photoperiodism

.....

(f) Hydronasty

.....

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

(a)is a natural auxin, where as
..... is a synthetic auxin

(b) In most plants auxin is synthesized from the amino acid,

(c) Gibbberelins are diterpenes and are synthesized via
..... pathway

(d) Cytokinins are derivatives

(e) Gibberellin was first detected in the fungus
.....

(f) Coconut milk is a rich source of the hormone,

(g) The abnormal growth termed triple response in dark grown seedlings is caused by
.....

(i) act as the dormancy inducing hormone.

(j) and are plant growth regulators that are involved in senescence, while shows an opposite action.