

OLABISI ONABANJO UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY
2014/2015 HARMATTAN SEMESTER EXAMINATION

COURSE CODE BCH 411

COURSE TITLE: PLANT BIOCHEMISTRY

INSTRUCTION: Answer four (4) questions only

- 1 a The cell has been described as "the basic unit of every organism".
- Using appropriate diagram (only), identify important plant cell organelles.
 - List one important role of each of the organelle identified above.
 - Identify the organelles that differentiate the cell above from a typical animal cell.
- b. ~~Describe the plant tissue system and enumerate the composition and roles of each~~
- c. ~~List five (5) biological functions of plant cell wall~~
- 2 a. ~~What are phytohormones and how are they ~~app~~ regulators?~~
- ~~ii. Explain the mechanisms by which actions of plant hormones are regulated.~~
- b. Describe the role of plant hormones in the following physiological processes
- Leave formation
 - Phototropism
 - Apical dominance
 - Abscission
3. A plant is widely used in Arabambi community as an all-purpose herb. As a research student in medicinal plant, give a detail description of how you will:
- Screen the plant for its bioactive compounds.
 - Verify the claim that the plant is efficacious against a named ailment.
- 4 a. i. Discuss the importance of photosynthesis to all living organisms.
- What is the significance of light dependent reaction of photosynthesis?
 - Using appropriate biochemical pathway only, describe the light independent reaction of photosynthesis.

- b. How are plants leaving in extreme weather conditions protected from the problem of photorespiration and also synthesis glucose in conditions of limited CO_2 supply?

5. Phytochemicals are important secondary metabolic products of plant with basic characteristic structures and plays diverse medicinal, biochemical and physiological roles

- a. Discuss this statement using the example of a named phytochemical.
- b. List 5 different methods of extracting phytochemicals and describe one (1) of the procedures.

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