Unit 6 - Week 4: Biofuels II

Course outline

How to access the portal

Pre-requisite assignment

Week 1: Introduction to Bioenergy

Week 2: Basics of Biomass Technology & Biomass Resources

Week 3: Biofuels I

Week 4: Biofuels II

- Lecture 16 - Efficiency Calculation of Photosynthesis Process
- Lecture 17 - C3 & C4 Plant Structure and Photosynthesis Process
- Lecture 18 - Biomass production System and their Categorization
- Lecture 19 - Important Parameters for Selecting Biomass Crops
- Lecture 20 - Factors Determining the Conversion Process - I
- Lecture Notes
- Quiz : Assignment 4
- Solutions - Assignment 4
- Feedback for Week 4

Week 5: Biofuels III

Week 6: Bio Power I

Week 7: Bio Power II

Week 8: Bioenergy Distribution & End Use For a Sustainable Future

Assignment 4

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-08-28, 23:59 IST.

1) In C4 plants, mesophyll cells are _____ *1 point*

- not present
- loosely packed
- densely packed
- replace by stomata

No, the answer is incorrect.
Score: 0
Accepted Answers:
densely packed

2) In C3 plants, mesophyll cells are _____ *1 point*

- not present
- loosely packed
- densely packed
- replaced by epidermis

No, the answer is incorrect.
Score: 0
Accepted Answers:
loosely packed

3) _____ is a chemical reaction between molecular hydrogen and another compound or element, usually in the presence of a catalyst such as Ni, Pd, or Pt. *1 point*

- Carbonisation
- Hydrolysis
- Oxidation
- Hydrogenation

No, the answer is incorrect.
Score: 0
Accepted Answers:
Hydrogenation

4) Which of the following combine to form sucrose *1 point*

- glucose, glucose
- glucose, fructose
- fructose, fructose
- fructose, hexane

No, the answer is incorrect.
Score: 0
Accepted Answers:
glucose, fructose

5) _____ falls under thermochemical process of biomass to energy conversion *1 point*

- Grinding
- Pyrolysis
- Bacterial degradation
- Chopping

No, the answer is incorrect.
Score: 0
Accepted Answers:
Pyrolysis

6) Gasification falls under thermochemical process of _____ conversion *1 point*

- water to biomass
- water to wind
- biomass to energy
- wind to energy

No, the answer is incorrect.
Score: 0
Accepted Answers:
biomass to energy

7) Balance the reaction: $6CO_2 + 18ATP + 12H_2O + xNADPH \rightarrow C_6H_{12}O_6 + yADP + zP + 12\ NADP^+ + 6H^+$ *1 point*

- x = 18 y = 18, z = 18
- x = 12 y = 18, z = 12
- x = 12 y = 18, z = 18
- x = 18 y = 12, z = 18

No, the answer is incorrect.
Score: 0
Accepted Answers:
x = 12 y = 18, z = 18

8) The reaction in Question 7 sums up which reaction *1 point*

- Citric acid cycle
- Calvin cycle
- Glycolysis
- Oxidative phosphorylation

No, the answer is incorrect.
Score: 0
Accepted Answers:
Calvin cycle

9) If temperature increases, affinity of rubisco for oxygen _____ and correspondingly, photorespiration _____ *1 point*

- increases, increases
- increases, decreases
- decreases, increases
- decreases, decreases

No, the answer is incorrect.
Score: 0
Accepted Answers:
increases, increases

10) In wood, the moisture is _____ and fixed carbon is _____ *1 point*

- 20%, 17%
- 1%, 2%
- 100%, 200%
- 82%, 1%

No, the answer is incorrect.
Score: 0
Accepted Answers:
20%, 17%