

Unit 9 - Week 7: Bio Power 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

Week 5: Biofuels III

Week 6: Bio Power I

Week 7: Bio Power II

- Lecture 31 - Introduction of Gasification
- Lecture 32 - Thermo Chemical Process of Gasification
- Lecture 33 - Feed Stock Treatment of Gasification
- Lecture 34 - Feed Stock Property
- Lecture 35 - Gasification Types - Up Drift Gasifier
- Lecture Notes
- Quiz : Assignment 7
- Feedback for Week 7
- Solutions - Assignment 7

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

Assignment 7

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

Due on 2019-09-18, 23:59 IST.

- 1) _____ liquefaction involves hydrothermal liquefaction and rapid pyrolysis to produce liquid tars and oils and/ or condensible organic vapours **1 point**
- Direct
 Indirect
 Simple
 Complex

No, the answer is incorrect.
Score: 0

Accepted Answers:
Direct

- 2) _____ liquefaction involves the use of catalyst to convert non condensible, gaseous products of pyrolysis or gasification into liquid products **1 point**
- Direct
 Indirect
 Simple
 Complex

No, the answer is incorrect.
Score: 0

Accepted Answers:
Indirect

- 3) The _____ fraction of pyrolysis products consists of two phases: an aqueous phase containing a wide variety of organo-oxygen compounds of low molecular weight and a non aqueous phase containing insoluble organics of high molecular weight **1 point**
- solid
 liquid
 gas
 plasma

No, the answer is incorrect.
Score: 0

Accepted Answers:
liquid

- 4) _____ is a process by which biomass is converted into combustible gaseous product. **1 point**
- Combustion
 Hydrolysis
 Gasification
 Hydrogenation

No, the answer is incorrect.
Score: 0

Accepted Answers:
Gasification

- 5) Advantages of gasification are **1 point**
- Standardisation of gas to ensure quality
 Versatile usage of product than biomass
 Gas can be used to produce biofuel
 All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of the above

- 6) Gasification at high _____ is called _____ process **1 point**
- temperature, biochemical
 temperature, thermochemical
 pressure, biochemical
 pressure, thermochemical

No, the answer is incorrect.
Score: 0

Accepted Answers:
temperature, thermochemical

- 7) A _____ engine is a device that converts thermal energy into mechanical output **1 point**
- electrical engine
 magnetic engine
 heat engine
 water engine

No, the answer is incorrect.
Score: 0

Accepted Answers:
heat engine

- 8) The calorific value of 'low calorific value gas' obtained via gasification is around **1 point**
- 0.1-0.4 MJ/Nm³
 40 MJ/Nm³
 4-6 MJ/Nm³
 12-18 MJ/Nm³

No, the answer is incorrect.
Score: 0

Accepted Answers:
4-6 MJ/Nm³

- 9) Use of air as a gasifying agent gives product gas of low CV because of presence of high percentage of _____ in air **1 point**
- hydrogen
 nitrogen
 oxygen
 carbon

No, the answer is incorrect.
Score: 0

Accepted Answers:
nitrogen

- 10) Which of these is not a gasification types **1 point**
- Fixed bed
 Fluidised bed
 Entrained suspension gasifier
 Fractionation

No, the answer is incorrect.
Score: 0

Accepted Answers:
Fractionation