G.V. Kumar

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- Sept' 2017

B.Tech (Biotech.), VIIth Semester

COURSE CODE: 14B1WBT731 MAX. MARKS:15

COURSE NAME: Bioenergy & Biofuels

COURSE CREDITS: 3 MAX. TIME: 1 h

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

I. Match the following one's **(5 x 0.5 = 2.5 M)**

Pretreatment Technique	Disadvantage
(a) Biological	(i) don't affect lignin and hemicelluloses
(b) AFEX	(ii) recycling of solvent
(c) CO_2- explosion	(iii) can't handle high lignin-content
(d) OrganoSolv	(iv) reactor corrosion problems
(e) Conc. Acid	(v) low rate of hydrolysis

II. Short answer questions **(5 x 1 = 5 M)**

(i) Give any two examples of non-edible oils used for Bio-diesel production?

(ii) Mention any two disadvantages of lipase-catalyzed transesterification over chemical transesterification?

(iii) Define the "Sustainability" of Biomass?

(iv) Mention any two names of reactions used to produce "Green Diesel" from renewable feedstocks?

(v) Mention the names of any two classes of degradation compounds produced during pretreatment of lignocellulosic biomass?

III. Hypothesis (YES or NO) and provide the supporting text in 4-5 lines **(3 x 2.5 = 7.5 M)**

(A) Oleochemicals can replace petrochemicals

(B) There is no techniques to assess the pretreatment technique of lignocellulosic biomass

(C) Organosolv pretreatment technique won't have any disadvantages

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BT-8, BT