

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST – 3 EXAMINATION, MAY-JUNE 2016

B.TECH VIII SEMESTER

COURSE CODE: 14B1WBT741

MAX. MARKS: 35

COURSE NAME: Bioresource and Industrial Products

COURSE CREDITS: 03

MAX. TIME: 2 HRS

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Note: All questions are compulsory. Carrying of mobile phone during examination will be treated as case of unfair means. Each question carries 05 marks.

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- Q1. How can the plant biomass be converted to soluble sugars to support ethanogenesis fermentation? Explain all possible steps beginning from procurement, then processing and product formation. Also, mention the theoretical ethanol yield of 01 kg of glucose. Show your calculations.
- Q2. List and elaborate all steps to isolate and screen an antibiotic producer from soil. (Draw diagrams wherever necessary).
- Q3: Highlight the Socio-Economic aspects linked to bioresources giving suitable examples especially for rural segment of the country.
- Q4: What is briquette technology? Explain the process of briquette formation from suitable raw material of Himachal Pradesh. What is the current progress in this field?
- Q5: How do we industrially produce Penicillins? Explain the kinetics of the penicillin fermentation using *Penicillium chrysogenum* (Draw diagrams wherever necessary).
- Q6: Can you consider Extremophiles (Algae, Bacteria, Achaea) as a bioresource? Justify your answer giving at least 4 examples.
- Q7: Categorize first, second and third generation feed stocks? Justify your answer providing appropriate supportive evidence.
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