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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATIONS-2022

B.Tech-VI Semester (BT)

COURSE CODE: 18B1WBT634

MAX. MARKS: 15

COURSE NAME: Bioenergy and Biofuels

COURSE CREDITS: 3

MAX. TIME: 1 Hour

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks are indicated against each question in square brackets.*

**Q1.** Why the biomass energy is considered as carbon-neutral? What you understand about the sustainability of biomass? Name the raw material used for bioethanol production by any two countries? (3 M)

**Q2.** How third-generation biofuels differ with the second-generation biofuels? Mention the drawbacks associated with the first- and second-generation biofuels? (3 M)

**Q3.** Mention the process used for biodiesel production and write briefly about the process description? When you will suggest the usage of heterogeneous catalyst usage in biodiesel production and mention the series of events handle by the heterogeneous catalyst? (3 M)

**Q4.** What are the different aspects of microalgal biofuel production which captures the attention of researchers and entrepreneurs? Mention any four claims against the microalgal biofuel production? (3 M)

**Q5.** What is SWOT analysis and write briefly about the SWOT components of microalgal biofuels? (3 M)

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