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**DHANALAKSHMI SRINIVASAN COLLEGE
OF ARTS & SCIENCE FOR WOMEN
(AUTONOMOUS)**

(For Candidates admitted from 2018-2019 onwards)

UG DEGREE EXAMINATIONS APRIL - 2021

B.Sc., - BIOTECHNOLOGY

BIORESOURCE TECHNOLOGY

Time: 3 Hrs

Max.Marks: 75



PART - A

CHOOSE THE CORRECT ANSWER

(10X1=10)

1. Which of the following is not a type of primary resource?
a) crude oil b) coal c) Hydergon energy d) sunlight
2. What are the three bands of solar radiation?
a) UV, infrared and farinfrared b) UV, visible and infrared
c) Ultrasonic, infrared and visible d) UV, ultrasonic and near infrared
3. Which of these is not a form of bioconversion rule?
a) direct combustion b) fermentation
c) thermochemical conversion d) biochemical conversion
4. Which of these is an important measure of performance for a power plant?
a) NPHR b) AP c) NTO d) HHV
5. Which of the following is a substrate for biogas production?
a) Municipal residential waste b) E-Waste c) Metallic Waste d) Gaseous effluents
6. Which of the following is used to produce biogas from biomass?
a) Anaerobic treatment b) Aerobic treatment c) fermentation d) Pyrolysis
7. The production of bio ehtonol is by fermenting _____ and starch components.
a) Acid b) Sugar c) Milk d) Alcohol
8. The bioethanol obtained in the fermentation process has _____ purity
a) 99% b) 99.2% c) 99.4% d) 99.7%
9. Which chemical reaction makes biodiesel?
a) polymerization b) fermentation c) transesterification d) submilaiton
10. What typical catalyst is used to make biodiesel?
a) Acid catalyst b) Ultraviolet light c) platinum d) Base catalyst

PART - B

ANSWER ALL THE QUESTIONS

(5X7=35)

11. a) What is renewable energy?

(OR)

b) How renewable energy will benefit society?

12. a) What are biofuels?

(OR)

b) Discuss about industrial ethanol.

13. a) What are the environmental impacts of using biogas?

(OR)

b) Discuss the factors affecting methane formation.

14. a) What are the advantages of ethanol over fossil fuels.

(OR)

b) What is air fuel ratio?

15. a) What is biodiesel?

(OR)

b) How biodiesel emissions compare to petroleum diesel?

PART - C

ANSWER ANY THREE QUESTIONS

(3X10=30)

16. Explain in brief about different types of renewable energy.

17. Discuss in detail about bioconversion of lignocellulosic and cellulose saccharification.

18. What is the role of methanogens?

19. Discuss in detail about Butanol production process

20. Discuss about the various Applications of biodiesel.