QP CODE: 22103857

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Reg No : .....

Name : .....

B.VOC DEGREE REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, NOVEMBER 2022

Fourth Semester

B.Voc Renewable Energy Technology and Management

RETTG402 - WASTE TO ENERGY CONVERSION

2018 Admission Onwards

1D7CF690

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Briefly explain municipal solid waste.
2. List out the various authorities who have the access to collect waste for removal from premises.
3. List out the '3 R's required for waste minimization.
4. List out the various factors affecting aerobic composting.
5. Explain the effect of moisture content in landfill gas production.
6. List out the storage and collection facilities implemented for MSW in Indian cities.
7. Give any two examples of solid waste.
8. What is briquetting?
9. What is a dif=gester?
10. What do you mean by green city?
11. How can we classify the waste to energy conversion?
12. Can you identify the most favourable and least favourable option in management of waste.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Write a note on agricultural waste.

14. Describe waste segregation.

15. How do the MRF's inefficiencies impact the customer?

16. Write a note on municipal solid waste landfill.

17. How is landfill gas collected?

18. Explain combustion of MSW with respect to the refuse derived fuel system.

19. Explain the effect on performance of a micro turbine with the addition of landfill gas.

20. Explain the process of biological hydrogen production.

21. Write a note on health risks caused by incineration.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. With the help of a figure explain waste hierarchy.

23. With the help of a neat sketch explain the gas venting system in a landfill.

24. With the help of a flow chart explain the various operations involved in the coal-biomass gasification.

25. Write a note on any one of the waste to energy plant in India.

(2×15=30)