

SUBJECT CODE: 16VS/VM/BE36

B.Voc. DEGREE EXAMINATION, NOVEMBER 2019
SUSTAINABLE ENERGY MANAGEMENT
THIRD SEMESTER

COURSE : MAJOR CORE
PAPER : BIO ENERGY
TIME : 6 HOURS

MAX.MARKS:100

SECTION –A

(Theory: 50 marks+Practical: 50 marks)

ANSWER ALL QUESTIONS:

(20x1=20)

CHOOSE THE CORRECT ANSWER

- An example of Biomass in the environment
 - Sugarcane
 - Feedstock
 - ASP
 - Microbes
- Which is not a agricultural source for biomass production?
 - Sugarcane
 - molasses
 - virus
 - Microbes
- Which is/are a biogas plant model
 - Janata
 - Dhinabanthu
 - Margabanthu
 - All of the above
- Advantage of biogas production
 - Low cost
 - ecofriendly
 - Renewable Energy
 - All of the above

FILL IN THE BLANKS:

- The types of biogas plants are _____, _____ and _____.
- The _____ and _____ are marine sources from which biofuel is produced.
- The advantages of Direct dome are _____ and _____.
- The two types of wood wastes are _____ and _____.
- Is it true that Biomass is a consortium of microbes _____ and why?

STATE WHEATHER TRUE OR FALSE

- Algae is second generation feed stocks used in biogas production.
- Slurry handling important in biogas production
- Mask and Gloves are important safety measures on biogas plant installation
- Iron is an important feedstock used for biofuel production.
- Wood is a very good biomass.

DEFINE THE FOLLOWING:

15. Define Bioconversion.
16. Define Biochar?
17. Define Incineration process.
18. Define Anaerobic fermentation
19. Define Environmental Sustainability.
20. Hybrid systems.

SECTION – B**ANSWER ANY SIX QUESTIONS:****(6x3=18)**

21. Write an account on biomass used for biogas production?
22. Give the Schematic process of a waste incineration?
23. How are agricultural waste and energy crops used in biogas production?
24. Give an account on applications of landfill gases?
25. Write the maintenance and operation methods of Fixed dome type biogas plant.
26. Give an account on biomass conversion process.
27. What are the advantages and disadvantages of Biogas production?
28. Give a detailed diagrammatic representation of waste incineration energy plant?
29. Write a brief note on wood and wood waste incineration plant?
30. Write a brief account on anaerobic fermentation process.

SECTION – C**ANSWER ANY TWO QUESTIONS:****(2x6=12)**

31. Write a detail account on Biomass, its energy resources, how are they classified and its benefits?
32. Give the Classification of the Biomass resources and give its importance.
33. Explain in detail on the types of biogas plants with advantages and disadvantages.
34. Explain in brief on Biogas production scenario in India?
