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Question Paper Code:U6404

M.E. DEGREE EXAMINATION, NOV 2024

Professional Elective

Power Electronics and Drives

21PPE604 - BIOENERGY FROM WASTE

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Define the sources, types and composition of various types of wastes. CO1- U (20)
Or
(b) Briefly describe about the Municipal Solid Waste (MSW) , Industrial waste and Biomedical Waste (BMW). CO1-U (20)
2. (a) Explain about landfills with a layout and preliminary design CO2- U (20)
Or
(b) Discuss about the composition, characteristics, generation, movement and control of landfill leachate and gases. CO2- U (20)
3. (a) What is pyrolysis? Explain the process with schematic diagram to convert MSW to electricity. CO3- App (20)
Or
(b) What is briquetting process? Discuss about its utilization and advantages of briquetting. CO3- App (20)
4. (a) Explain the process involved in Anaerobic digestion of sewage and municipal wastes. CO4- Ana (20)
Or
(b) Explain the direct combustion of MSW-refuse derived solid fuel & industrial waste. CO4-Ana (20)

5. (a) Discuss about eco-technological alternatives for Waste to energy conversions. CO5- Ana (20)

Or

(b) Discuss about the rules related to the handling, treatment and disposal of MSW and BMW in India. CO5- Ana (20)