

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2019 – 20 Examination

Semester: 3

Subject Code: 203200206

Subject Name: Waste to Energy

Date: 28/11/2019

Time: 10:30am to 01:00pm

Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) Explain Biomass Energy Program in India. (05)
B) Classify wastes according to their origin and type. (05)
C) Brief: Biomass Gasification reactions. (05)
- Q.2** Answer the following questions. (Attempt any three) (15)
A) What is Pyrolysis? Explain slow and fast pyrolysis. Also list pyrolysis factors.
B) Explain alcohol production from Biomass.
C) What are wastes? Explain impacts of waste.
D) What should be done by us to reduce impact of waste on us?
- Q.3** A) List parameters of any three approved Models of Portable Improved Biomass Cookstoves. (07)
B) Explain manufacture of charcoal. (08)
- OR**
- B) Explain floating gas holder type biogas plant with neat sketch. (08)
- Q.4** A) Explain Anaerobic Fermentation (Digestion) process used in Biogas Plants. (07)
- OR**
- A) Brief: a) downdraft gasifier b) updraft gasifier. (07)
B) Explain Smokeless chullah. List its advantages and disadvantages. (08)