

OR

(ii) The following data are given for a family biogas digester suitable for the output of 10 cows: the retention time : 21 days, temperature : 30°C, dry matter consumed per day : 4 kg, biogas yield : 0.25 m³/kg. The efficiency of the burner is 65 %, methane proportion is 0.81. Heat of combustion of methane = 28 MJ/m³. Design suitable biogas digester and compute the power output from the digester.

14. (i) What is the basic principle of OTEC? Explain the hybrid cycle of OTEC system, with its advantages over both closed and open OTEC systems.

OR

(ii) Explain with sketches the various methods of tidal power generation and discuss the techniques for the storage of tidal energy generated.

15. (i) Explain environmental aspects of using (i) Solar energy (ii) Biomass energy for power generation

OR

(ii) (a) Outline the potential of various renewable energy sources and current achievements in respect of power generation in India (10)
(b) Draw a schematic of solar thermal power plant and Explain.

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