

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech., Summer - 2018 Examination

Semester: 2
Subject Code: 03207180
Subject Name: Non Conventional Energy Sources

Date: 30/05/2018
Time: 02:00 pm to 04:30 pm
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) Compare Concentrating Collectors with Flat Plate type Collectors. (05)
B) Give merits and demerits of Wind Energy Conversion System. (05)
C) What do you mean by Lift and Drag in terms of Wind energy. (05)
- Q.2 Answer the following questions.** (Attempt any three) (Each five mark) (15)
A) What are the advantages and disadvantages of Fuel Cell?
B) Write a Short note on Kyoto Protocol.
C) Explain any one Concentrating type Solar plate Collector.
D) Write short note on Sunshine Recorder.
- Q.3** A) What is a fuel cell? Describe the Working of a fuel cell with reference to a H₂- O₂ cell. (07)
B) Derive the equation for Maximum Power Extracted from the Wind. (08)
- OR**
- B) Write short note on the 'Open cycle' and 'Closed cycle' OTEC System. (08)
- Q.4** A) Enumerate different types of Batteries and Explain Any One. (07)
- OR**
- A) Explain Compressed Air Energy Storage System. (07)
B) What do you mean by Solar radiation? How you can measure Solar radiation? Explain any One Device. (08)