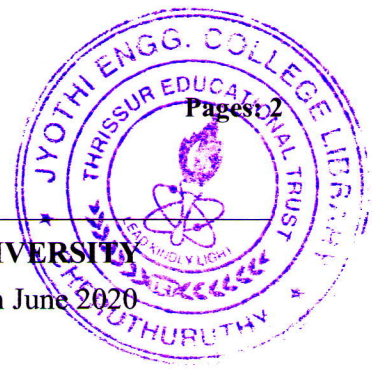


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree (Hons.) Examination June 2020

**Course Code: MR364****Course Name: ENERGY ENGINEERING AND MANAGEMENT**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions, each carries 5 marks.*

- | | | |
|---|---|---|
| 1 | Define solar constant. What is the standard value of solar constant? | 5 |
| 2 | List the main advantages and disadvantages of biomass energy. | 5 |
| 3 | Define Beau fort number. How many levels are used in the Beau form number system? | 5 |
| 4 | What are the various methods used to conserve energy in steam system? | 5 |
| 5 | Enumerate different types of waste. | 5 |
| 6 | Compare chemical and biological properties of waste. | 5 |
| 7 | Write a short note on Design Registration. | 5 |
| 8 | Differentiate between copy right and trade mark. | 5 |

PART B*Answer any three questions, each carries 10 marks.*

- | | | |
|----|---|----|
| 9 | a) Describe the working of Pyranometer with necessary sketches. | 5 |
| | b) Draw and explain the characteristics of Photo Voltaic cell. | 5 |
| 10 | Elucidate about Biomass gasification and Liquefaction. | 10 |
| 11 | a) Write any 3 Challenges to design a wind farm. Explain the working principle of an instrument used to measure wind speed. | 5 |
| | b) Define various Gust parameters with a neat sketch. | 5 |
| 12 | Give a detailed description about M and T process. | 10 |
| 13 | a) Illustrate the working principle of sunshine recorders with suitable sketches | 5 |
| | b) List any 5 properties of biomass. | 5 |

PART C*Answer any two questions, each carries 15 marks.*

- | | | |
|----|--|----|
| 14 | a) Illustrate the concept "Collection and transfer stations were played an important role in waste management system". | 5 |
| | b) Describe the various waste minimization techniques used in present scenario. | 10 |

- 15 a) Define the process Aerobic Composting with its advantages. 5
- b) Give a detailed description about recycling of municipal waste. 10
- 16 a) Briefly explain the term 'Technology Transfer Model'. 8
- b) Narrate the role of WTO in Technology management. 7
- 17 a) Describe the following 8
 - i. Patent Specification
 - ii. Patent search websites
- b) Elucidate about Trade secrets. 7
