

SHRI RAMSWAROOP MEMORIAL UNIVERSITY

End Semester Examination (2021-22)-Odd Semester

M. Tech. (Renewable Energy) – I Year (I Sem)

| | |
|--|----------------------------|
| Course Name: Introduction to Energy Studies | Code: MEE1009/1005P |
| Time: 02 Hours | Max Marks: 60 |

| | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| University Roll No. | <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> </table> | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| (To be filled by the Student) | | | | | | | | | | | | | | | | | | | |

Note: Please read instructions carefully:

- a) The question paper has 03 sections and it is compulsory to attempt all sections.
 b) All questions of Section A are compulsory; questions in Section B and C contain choice.

| Section A: Very Short Answer type Questions | | BL | CLO | Marks (10) |
|---|---|-----------|------------|-------------------|
| Attempt all the questions. | | | | |
| 1. | What are the three main sources of renewable and non-renewable energy? | BL1 | CLO1 | 02 |
| 2. | Illustrate the motives of Energy Conservation Act. | BL 2 | CLO 2 | 02 |
| 3. | Briefly explain Capacity factor and Reserve factor for a plant. | BL 2 | CLO 3 | 02 |
| 4. | What is BEE? | BL 1 | CLO 4 | 02 |
| 5. | What are bio-fuels? | BL 1 | CLO 4 | 02 |
| Section B: Short Answer Type Questions | | BL | CLO | Marks (30) |
| Attempt any 03 out of 06 questions. | | | | |
| 1. | Illustrate the steps involved in Energy management Strategy. | BL 2 | CLO 2 | 10 |
| 2. | Distinguish between preliminary energy and detailed energy audit. | BL 4 | CLO 2 | 10 |
| 3. | Explain how energy pricing is done in India. | BL 5 | CLO 3 | 10 |
| 4. | What do you understand by the term waste heat? Give two examples of waste heat recovery. | BL 1 | CLO 4 | 10 |
| 5. | Compare 'combustion' and 'incineration'. | BL 4 | CLO 4 | 10 |
| 6. | Compare the advantages of fuel source coal and LPG. | BL 4 | CLO1 | 10 |
| Section C: Long Answer Type Questions/Case Study | | BL | CLO | Marks (20) |
| Attempt any 01 out of 04 questions. | | | | |
| 1. | Explain in detail about Nuclear reactor used in India. | BL 5 | CLO 1 | 20 |
| 2. | Categorize the different nodal agencies for power in India? Briefly explain their responsibilities. | BL 4 | CLO 2 | 20 |
| 3. | Explain some of the long-term energy strategies available for the better energy secured nation. | BL 4 | CLO 3 | 20 |
| 4. | What are the plants used to make Bio-diesel fuel? How can bio-fuels be the solution to the impending energy crisis? | BL 1 | CLO 4 | 20 |