



Regulation R18

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code:205BD

B.Tech V Semester Supplementary Examinations, June/July 2023
Non Conventional Power Generation

(BEE)

Maximum Marks: 70

Date:04.07.2023 Duration: 3 hours

- Note: 1. This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Total 10 questions it consists.
4. Part-B each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Define solar altitude angle
- 2 What are the advantages of renewable energy sources
- 3 What are the applications of solar air heaters
- 4 What are the main components of a flat plate solar collector
- 5 How the wind mills are classified
- 6 What are the disadvantages of wind power?
- 7 Mention some organic materials used in bio-mass plant
- 8 What are the disadvantages of geothermal plant
- 9 What is OTEC closed (Anderson) cycle
- 10 What is See beck Thermo Electric Effect

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 Explain the working of a Pyrheliometer. [10]
OR
- 12 What is meant by solar radiation data? Explain the information contained in it. [10]
- 13 Explain the advantages of concentrating collectors over flat plate collectors. [10]
OR
- 14 Explain with a neat sketch the working principle of standalone and grid Connected solar system. [10]
- 15 Explain Betz criterion and derive an expression for the same. [10]
OR
- 16 Explain Horizontal axis wind mills with neat sketch. [10]
- 17 What is the difference between Bio mass and bio gas. [10]
OR
- 18 What are the classifications of geo thermal sources. [10]
- 19 Explain the principle on which OTEC plants are work. [10]
OR
- 20 Explain about various fuel cells and its applications. [10]