**K.S.R.M COLLEGE OF ENGINEERING (Autonomous), KADAPA**

**B.Tech VIII Sem [R15] ME (A&B/s) I Mid Examinations, JULY 2021**

**Subject:** RENEWABLE ENERGY RESOURCE

**Time:1:30hr Max Marks:30**

**Answer Any Three Questions. First Question is compulsory**

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| **S.No.** | | **QUESTION** | **Marks** | **CO** | **Blooms Level** |
| 1) | a) | Difference between the Flat plate collector and concentrate collector | 2 | **CO** 1 | L1 |
| b) | List out the applications of solar energy | 2 | **CO** 1 | L1 |
| c) | Write the principle of sunshine recorder. | 2 | **CO** 2 | L1 |
| d) | Classify different wind turbine rotors? | 2 | **CO** 3 | L1 |
| e) | Why horizontal axis wind turbines are preferred over vertical axis wind turbines? | 2 | **CO** 3 | L2 |
| 2) | | a) What is solar constant & Explain terrestrial and Extra-terrestrial solar radiation? (5M)  b) Explain the solar Radiation of Tilted Surfaces? (5M) | 10 | **CO** 1 | L2 |
| 3) | | a) What is solar energy collector? Explain the working of a Flat plate solar collector. (5M)  b) What are the types of concentrative collectors?. Explain with central receiver with heliostat solar concentrative collector. (5M) | 10 | **CO** 2 | L3 |
| 4) | | a) What are advantage & disadvantage of Horizontal Axis Wind Turbine (HAWT). (5M)  b) Sketch the diagram of a Horizontal Axis Wind Turbine ( HAWT ) and explain the function of its main arrangement. (5M) | 10 | **CO**3 | L3 |
| 5) | | a) Explain the working of solar distillation system? (5M)  b) Explain the working of solar pond system? (5M) | 10 | **CO 2** | L2 |

Faculty: C.Nagaraja, Asst. Professor , MED