**Code No: 138FK** **R16**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**
**B. Tech IV Year II Semester Examinations, September - 2020**
**WIND, SOLAR AND HYBRID ENERGY SYSTEMS**
**(Electrical and Electronics Engineering)**

**Time: 2 Hours** **Max. Marks: 75**

**Answer any Five Questions**
**All Questions Carry Equal Marks**
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1. Explain the weibull distribution to actual wind speed distribution of a typical region. [15]
2. Discuss the wind power statistics in India and global scenario. [15]
3. Discuss the power electronic converters used in wind energy conversion. Also, explain the converter control. [15]
4. Explain the differences between fixed speed and variable speed wind turbines. [15]
5. Discuss different solar photovoltaic technologies in detail. [15]
6. Discuss the procedure of estimating the solar energy availability. [15]
7. What is solar pond? Explain the main applications of solar pond? [15]
8. What are the power quality issues in the interconnected systems of solar PV and wind systems? Elaborate. [15]

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