**WINTER 2022 QUESTIONS BANK**

**RENEWABLE ENERGY SYSTEM**

**6TH SEM ELECTRICAL**

**2 MARK QUESTIONS**

**1.What are the classifications of wind turbines?**

**2. What are the various major parts of a wind turbine?**

**3. What is the function of rotor and blade of a turbine?**

**4. What do you mean by aerodynamics in wind turbines?**

**5. What is a solar cell and what is its function?**

**6.What do you mean by photovoltaic effect?**

**7. Define solar constant?**

**8.What is meant by azimuth angle?**

**9. What are biomasses?**

**10. Define pyrolysis?**

**11. Define zenith angle?**

**12. Define max. power point tracking (MPPT)?**

**13. Draw the current (1)-voltage (V) characteristics of a solar cell?**

**14. What are the types of tidal power plants?**

**15. By which instrument, we can measure solar radiation?**

**16. Write down the empirical power generated in kW in a small hydel power plant?**

**17. What do you mean by retention time in biomass concent?**

**18. Define hour angle?**

**19.What does biodisel?**

**20. What are the draw backs (any two) of tidal power plants?**

**Long question**

**1. What are the classifications of wind turbines?**

 **2. Explain the aerodynamic operation of wind turbines?**

**3. Explain with neat block diagram about solar photovoltaic system?**

**4. Explain in brief about solar ponds?**

**5. How geothermal power is generated, explain?**

**6. What are fuel cells? Discuss briefly?**

**7. Discuss briefly about terrestrial solar radiation process briefly?**

**8. What do you mean by Solar Constant? Explain the spectral distribution of extra terrestrial radiantion?**

**9. What are photon energy and Fermi level in case of solar concept?**

**10.Derive the expressions for the potential energy kinetic energy, total energy and wave power in case of ocean energy wave?**

**11.Write down briefly about solar cookers with neat sketches?**

**12.Write short notes on wind power?**

**13. Write short notes on wind power?**

**14.Write short notes on solar power?**

**15. Write short notes on Tidal power briefly?**

**16. What are the classifications of small hydropower (PV) or micro hydel-PV stations?**

**17.Write briefly about biodiesel and mention its occurance and history and advantages?**

**18. What are the differences between anaerobic digestion and ethanol fomentation?**

**19. What are the applications of PV systems? Answer any three questions.**

**20.Explain with block diagram about geothermal power and its process of generation?**

**21. What are the advantages and disadvantages of wind energy system?**

**22. What are the major components of a micro small hydro projects?**

**23. Define Biomass gasification? Explain Gasifiers briefly?**

**24.What are solar concerting collectors? What are the types of contenting collectors, explain briefly?**

**25. What do you mean by photovoltaic effect? Discuss the efficiency of Solar Cells?**