

B. Sc. Semester-III (Honours) Examination, 2020 (CBCS)

Subject: Physics

Paper: SEC-I (Renewable Energy)

Time: 2 Hours

Full Marks: 40

Answer any eight of the following questions:

8×5=40

1. What do you mean by conventional and non-conventional energy? State the advantages and disadvantages of non-conventional energy sources.
2. Define photovoltaic effect. Describe the solar cell function with neat structure.
3. What is green house and how does it work? Draw a schematic diagram of a solar distillation system.
4. What is the cause of wind? What is power curve of a wind turbine? On which factors does the power output of a wind turbine depend?
5. Define osmosis. Is osmosis an active process? Briefly discuss the principle of generating osmotic power.
6. Write a short note on biochemical conversion.
7. State the principle of generating hydroelectricity. What are the advantages and disadvantages of a hydroelectric power plant? Name two hydroelectric power plants in India.
8. Discuss the different kinds of geothermal resources. Give two natural examples of geothermal energy sources.
9. How does a piezoelectric generator work? How is piezoelectric voltage measured? Can piezoelectric charge a battery?
10. What is electromagnetic energy harvesting? Explain with diagram the working principle of a linear electromagnetic generator.