

CLASS:X
ASSIGNMENT 3

SUBJECT:PHYSICS
CHAPTER: SOURCES OF ENERGY

1. What is energy?
2. What do you mean by 'source of energy'?
3. What should be the characteristics of a good source of energy?
4. Name a few sources of energy used in our daily life.
5. What are renewable and non-renewable sources of energy? Give examples of each.
6. Name some of the sources of energy used in ancient times.
7. Give 2 advantages and 2 disadvantages, each of renewable and non-renewable sources of energy.
8. What are fossil fuels? Give a few examples.
9. Name a gaseous fossil fuel.
10. Which of the following is not derived from solar energy: - geothermal, wind energy, fossil fuels, biomass.
11. What are the limitations of extracting energy from (a) the wind (b) the waves (c) the tides.
12. What are the environmental consequences of the increasing demand for energy? What steps would you suggest to reduce energy consumption?
13. Name two indirect ways of using solar energy.
14. give the transformation of energy (sequence) taking place in
(a) Thermal power plant (b) hydro power plant (c) solar cell
15. Give advantages and disadvantages of constructing dams.
16. Name the plant and animal products that are used as fuel.
17. What is biomass?
18. How do we get charcoal?
19. What is bio-gas?
20. What are the advantages of using bio-gas as fuel?
21. Why is burning of firewood in traditional chulhas considered disadvantageous?
22. Give the constituents of bio-gas.
23. What are the advantages of bio-gas over traditional fuels?
24. Describe the process of bio-gas production in a bio-gas plant.
25. Name the type of energy possessed by wind.
26. What is a (a) windmill (b) winds energy farm?
27. How does a windmill help in generating electricity?
28. How can wind be used for lifting or pumping up water?
29. Give the advantages and disadvantages of using wind as a source of energy.
30. What should be the minimum wind velocity for a windmill to function?
31. What is India's wind power potential? Where in India is the largest wind energy farm?
32. Electricity generated with (a) windmill (b) water stored in dam can be considered another form of solar energy. Explain.
33. What is Tidal energy? How can it be harnessed?
34. Can tidal energy be considered a potential source of energy? Explain giving reasons.
35. Name the forms in which energy from oceans is made available to us for use.
36. What is meant by 'alternative sources of energy'? Give examples.
37. What are OTEC power plants? How do these operate?
38. What is geothermal energy? What is its advantage?

39. Name the source (s) of energy (non-conventional) that can directly be used 24 hours a day.
40. What should be difference in temp of water at surface and depth of about 2 km for harnessing ocean thermal energy?
41. Name the ultimate source of all other sources of energy.
42. Name two appliances that use solar energy directly.
43. Name two indirect ways of using solar energy.
44. What is solar constant? What is its value?
45. Name the form (s) in which we receive sun's energy.
46. Inspite of exposure of many modern forms & ways of using energy, we are going back to use of solar energy. Why?
47. Name a few solar energy devices that are being used extensively these days.
48. Can we completely depend on solar energy for our energy requirements? Give reasons.
49. How can we overcome the limitation of using solar energy?
50. Why are solar heating devices painted black from inside?
51. What is the use of glass sheet in a solar heating device?
52. Why do we use mirror in a solar cooker? What type of mirror is used in solar heating devices?
53. What is a solar cell?
54. Give the transformation of energy taking place in a solar cell.
55. What is a solar cell panel?
56. Name the material used for making solar cell.
57. What are the advantages of solar cells over solar heating devices?
58. Solar cells, inspite of many advantages are not used on a large scale for power production or for large scale power production. Why?
59. Give some of the uses or areas where solar cell / panels are being used.
60. What is nuclear energy?
61. Name two ways of obtaining nuclear energy.
62. Define nuclear fission.
63. Give examples of heavy atoms.
64. Name some elements that undergo nuclear fission.
65. Is nuclear energy considered a renewable or a non-renewable source of energy? Give reason.
66. Name the process of large energy production in (a) the sun (b) nuclear reactor.
67. What is a nuclear reactor?
68. What is a nuclear chain reaction?
69. Give advantages and disadvantages of using nuclear energy.
70. Give one example each of:-
 - (a) constructive use of nuclear energy
 - (b) Destructive use of nuclear energy.