

**Guess Paper – 2014**  
**Class – X**  
**Subject – Science**

**Sources of Energy**

**1mark questions**

1. Name the agent which decomposes animal dung into biogas.
2. What kind of mirror-concave, convex or plane would be best suited for use in solar cooker? Why?
3. Hydrogen has been used as a rocket fuel. Would you consider it a cleaner fuel than CNG? Why or why not?
4. What is geothermal energy?
5. Why is tidal energy not likely to be potential source of energy?
6. Write down the name of any one source of energy which is not derived from solar energy directly or indirectly.
7. Name any two semiconducting materials that are used for making solar cells.
8. If you could use any source of energy for heating your food, which one should you use and why?
9. Name the part of the box type solar cooker which allows the sun's heat rays to enter the box but does not allow inside to go out.
10. What are hot springs?
11. What is the main constituent of biogas?
12. Mention any two fuels that form the renewable sources of energy.
13. State two advantages of wind energy.
14. What is that energy called, which is derived from the heat inside the earth?
15. What do you mean by O.T.E?
16. Give an example of a nuclear fusion reaction.

**2mark questions**

17. Why the energy contained in fossil fuels can be considered to be the sun's energy.
18. Electricity generated by a windmill can be considered to be another form of solar energy. Why?
19. State two disadvantages of geothermal energy.

20. Explain how tidal energy can be used to generate electricity?
21. Write two disadvantage of using a solar cooker.
22. What is solar panel? Name two materials for fabricating it.
23. Draw a neat labelled diagram of a box type solar cooker.
24. Give any two advantages of using biogas over cow-dung cakes.
25. State two advantages of geothermal energy.
26. Write two advantages of using a solar cooker?
27. Electricity generated at hydroelectric power stations is considered to be another form of solar energy. Explain.
28. Give (i) two limitations (ii) two advantages of windmill.
29. Differentiate between renewable and non-renewable sources of energy.
30. What is a good resource of energy?
31. If you could use any source of energy for heating your food, which one would you use and why?
32. What are the advantages of nuclear energy?
33. State any two major hazards associated with a nuclear power plant.
34. Name two energy sources that you would consider to be renewable. Give reasons for your choices.
35. Compare and contrast bio-mass and hydro-electricity as source of energy.
36. What are qualities of an ideal source of energy?
37. What is geothermal energy? What are its advantages?
38. Define a nuclear fusion reaction. Describe the conditions for the occurrence of a nuclear fusion reaction.
39. Distinguish between renewable and a non-renewable source of energy.
40. What are the advantages of bio-gas over the traditional fuels?
41. Explain the working of a wind mill.
42. Why it is not possible to make use of solar cell to meet all our energy needs?  
State two reasons to support your answer.

**3mark questions**

43. (a) Name the device used to convert
  - (i) Solar energy into heat, and (ii) Solar energy into electricity.(a) Explain the principle of working of a windmill.
44. Describe how a solar cell is fabricated. Name two elements used for fabricating it.  
What is solar cell panel?

45. A student constructed a box type solar cooker. He found that it did not work efficiently. What could this be due to? Give 4 possible mistakes in the making & operation of the solar cooker.
46. State the limitations of solar energy available from solar cells.
47. Name three forms in which energy from ocean is made available for use. What are OTEC power plants? How do they operate?
48. Why is hydro energy considered as indirect source of solar energy? Describe the steps involved in converting hydro energy into chemical energy. What fraction of total energy needs of our country is met through hydro electricity?
49. What are the disadvantages of fossil fuels?
50. What are the limitations of the energy that can be obtained from the oceans?
51. (i) Name the four gases commonly present in bio-gas.  
(ii) List two advantages of using bio-gas over fossil fuels.
52. (i) What is bio-gas? How can bio-gas be obtained?  
(ii) What are the advantages of solar cells?
53. Draw a diagram and with the help of a diagram, explain the construction and working of a box type solar cooker.
54. Write three advantages of nuclear energy.

**5mark questions**

55. What are the advantage and disadvantage of using a solar cooker? Are there places where solar cookers would have limited utility? (a) Explain that the hydro electricity generated at a dam may be considered to be another form of solar energy.  
(a) Write two advantages and two limitations of hydro electricity.
56. Explain why flowing water is a renewable source of energy? Name the major fuel component of biogas. What are its other combustible components? Draw a simple labelled diagram of a biogas plant. What is the use for the residual slurry and why?
57. Name the original source of wind energy. Explain how, wind energy can be used to generate electricity. State two advantages of using wind energy for generating electricity. Mention two limitations of wind energy for generating electricity.

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