PHYSICS

BOOKS - VK GLOBAL PUBLICATION PHYSICS (HINGLISH)

SOURCES OF ENERGY

Ncert Intext Questions

1. What is a good source of energy ?

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2. What is a good fuel ?

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3. If you could any source of energy for heating your food, which one would you use and why ?

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4. What are the disadvantages of fuels ?

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5. Why are we looking at alternate sources of energy ?

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6. How has the traditional use of wind and energy been moditifed for our convenience ?

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7. What kind of mirror - concave, convex or plain would be best suited for use in a solar cooker ? Why ?

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8. What are the limitations of the energy that can be obtained from the oceans ?

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9. What is geothermal energy ?

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10. What are the advantages of nuclear energy ?

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11. Can any source of energy be pollution - free ? Why or why not?

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12. Hydrogen has been used as a rocket fuel . Would you consider it a cleaner fuel than CNG ? Why or why not ?

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13. Name two energy sources that you would consider to be renewable. Give reasons for your choices.

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14. Give the names of two energy sources that you would consider to be exhaustible. Give reasons for your choices.

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28. Give the names of two energy sources that you would consider to be exhaustible. Give reasons for your choices.

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Ncert Exercises

1. A solar water heater cannot be used to get hot water on

A. a sunny day

B. a cloudy day

C. a hot day

D. a windy day

Answer: B

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2. Which of the following is not an example of a bio - mass energy source ?

A. Wood

B. Gobar - gas

C. Nuclear energy

D. Coal

Answer: C

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3. Most of the sources of energy we use represent stored solar energy . Which of the following is not ultimately derived from the Sun's energy ?

A. Geothermal energy

B. Wind energy

C. Fossil fuel

D. Bio - mass

Answer: A

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4. Compare and contrast fossil fuels and the Sun as direct sources of energy .

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5. Compare and contrast biomass and hydroelectricity as sources of energy .

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6. What are the limitations of extracting energy from

(i) the wind (ii) waves (iii) tides

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7. On what basis would you classify energy sources ?

(i) Renewable and non - renewable

(ii) Exhaustible and inexhaustible

Are the options given in (i) and (ii) the same ?

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8. What are the qualities of an ideal source of energy ?

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9. What are the advantages and disadvantages of using a solar cooker ? Are there places where solar cookers would have limited utility ?

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10. What are the environmental consequences of the increasing demand for energy ? What steps would you suggest to reduce energy consumption?

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Very Short Answer Questions

1. What type of reactions occur inside the Sun which produces solar energy ?

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2. Which of the following are renewable and which are non - renewable sources of energy ?

Coal, wind , tides , Sun , petrol , biomass , CNG , hydro energy.

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3. Which part of Sun's energy is responsible for drying clothes and exposure to which part could be a health hazard?

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4. What type of energy is possessed by wind ?

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5. Though a hot iron emits radiations , yet it is not visible in the dark, why?

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6. What is bagasse?

View Text Solution

7. Define anaerobic degradation.

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8. Name the main constituent of biogas.

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9. What is the minimum wind velocity required for obtaining useful energy with a windmill ?

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10. Name two forms of energy in which solar energy manifests itself in oceans.

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11. Name any two materials that are used making solar cells.

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12. What is the range of wavelength of electromagnetic waves that constitute visible radiation ?

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13. What steps would you suggest to help minimise environmental pollution caused by burning of fassil fuels ?

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14. State the two forms of energy in which energy is mainly utilised at our homes.

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15. What are the different types of nuclear reactions?

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16. Why does acid rain happen ?

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17. What energy transformations occur in a hydro power plant?

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18. What is a chain reaction ?

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19. What type of reactions occur inside the Sun which produces solar energy ?

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Short Answer Questions I

1. What is the use of the black painted surface in solar heating devices ?

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2. Give an example of indirect harnessing of solar energy .

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3. State the important uses of wind energy .

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4. Write two advantages of classifying energy source as renewable and non - renewable.

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5. Why is tidal energy not likely to be potential source of energy ?

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6. Why is it not possible to make use of solar cells to meet all our energy needs? State at least two reason to support your answer.

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7. How is nuclear energy generated during nuclear fusion ?

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Short Answer Questions Ii

1. Firewood is a conventional fuel. Ling any four reasons for replacing it with alternate sources of energy.

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2. State two advantages and two disadvantages of geothermal energy.

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3. What is biogas ? Why is biogas considered an ideal fuel for domestic use ?

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4. Why is biogas a better fuel than animal dung cakes ?

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5. What causes the wind to blow ?

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6. Give some uses and advantages of solar energy.

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7. State the important uses of solar cells.

View Text Solution

8. Explain solar cell panel.

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9. Explain why only a small part of the solar energy that strikes the upper regions of atomosphere reaches the surface of the Earth.

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10. Why is charcoal considered a better fuel than wood? What are the disadvantages of converting wood into charcoal?

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11. Explain how the energy of following water is related to solar energy.

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12. Mention any two advantages and two disadvantages of producing hydroelectricity by building dams on rivers.

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13. What is the Importance of hydro power in India ? Describe how electric energy is generated in such plants.

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14. Name the device used to convert

(a) solar energy into heat, and (b) solar energy into electricity .

(ii) Explain the principle of working of a windmill.

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15. Describe the steps involved in obtaining biogas and explain what is meant by anaerobic decomposition.

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16. Biogas is considered to be a boon to the farmers . Give reasons.

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Long Answer Questions

1. Give the construction and working of a solar cooker.

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2. (a) Distinguish between renewable and non - renewable sources of energy .

(b) Choose the renewable of energy from the following list.

Coal , biogas, Sun, natural gas

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3. What is biogas ? Describe the working of a biogas plant with the help of a labelled diagram.

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4. What are the environmental consequences of using fossil fuels ? Suggest steps to minimise the pollution caused by various sources of energy including non - conventional sources of energy.

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5. Differentiate between box - type solar cooker and spherical reflector type solar cooker.

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6. Give the construction and working of a solar cooker.

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7. (a) Distinguish between renewable and non - renewable sources of energy .

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Hots Higher Order Thinking Skills

1. Which part of the solar cooker is responsible for greenhouse effect ?

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2. Though wood is a renewable source of energy, but the use of wood as fuel is not a wise decision. Explain.

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3. Wavelength of radiation incident on a surface is 850 nm. Will the surface become visible when exposed to this radiation ? Explain.

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