

Heat & Energy

DPP - 1

1. What do you understand by the term anomalous expansion of water?
2. Draw a graph between volume and temperature when 5 cm^3 of ice at -10°C is heated to form water at 10°C .
3. How do fishes survive in frozen lakes?
4. Explain the following:
 - (a) Why are soft drink bottles not completely filled?
 - (b) Why do water pipes burst during severe frost?
 - (c) Why does a glass bottle completely filled with water and tightly capped burst when placed in a freezer?
 - (d) Why are the taps left dripping in sub-zero temperature during winter?
 - (e) Why are the exposed water pipes lagged with straw in winter in hilly regions?
 - (f) Why do the vegetables and fruits get damaged during severe frost?
5. At what temperature does water have maximum density?
6. Water is heated from 0°C to 100°C . Sketch the temperature - volume graph to show the behaviour of water on heating.
7. A deep pond of water has its top layer frozen during winter. What will be the likely temperature of water layer (i) just in contact with ice (ii) at the bottom of pond?

Heat & Energy**DPP - 2**

1. Name two renewable and the two non-renewable sources of energy.
2. Why should we conserve the non-renewable sources of energy?
3. State the law of conservation of energy.
4. State the main difference between the renewable and non-renewable sources of energy.
5. Explain why is it no wise to regard wood as a renewable sources of energy.
6. Why are fossil fuels called non-renewable source of energy?
7. State two limitations of solar energy.
8. State four traditional uses of solar energy.
9. State three ways by which you can enhance the collection of solar energy.
10. State two advantages of box type solar cooker.
11. What is the range of temperature which can be achieved in it?
12. What are semiconductors? Name two semiconductors.
13. Name a device which directly converts solar energy to electric energy.
14. What is a solar panel? To what uses are the solar panels put?
15. What is biogas? Which component of biogas is used as fuel? Describe a fixed dome type biogas plant with the help of a labelled diagram.
16. Name an agent which decomposes animal dung into biogas.
17. Write any two uses of biogas.
18. Name the kind of energy possessed by the wind.
19. State two advantages and two limitations of wind as a source of energy.
20. With the help of a diagram explain how wind energy is converted into electric energy.
21. What do you understand by the term hydroelectric power?
22. Explain the energy changes taking place in a hydroelectric dam.
23. State two advantages and two limitations of Hydel Power.