PHYSICS

BOOKS - TARGET PUBLICATION

HEAT

Solved

1. Fill in the blanks with the proper word:

Cooking utensils are made from metals due to their property of _____.

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2. Fill in the blanks with the proper word from the brackets. :

..... Of heat does not require a medium.

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3. Fill in the blanks with the proper word from the brackets. :

The earth recieves heat from the sun by .....

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4. Fill in the blanks with the proper word from the brackets. :

Maximum heat is absorved by a ..... Coloured object.

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5. Fill in the blanks with the proper word from the brackets. :

Conduction of heat takes place through a ..... Substance.

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6. Fill in the blanks with the proper word from the brackets. :

The shining surface in a thermos flask decreases the outgoing heat by ..... .

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7. Odd one out :

Ironing clothes, heating a rod, holding hot cup of tea, taking warmth from bonfire.

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8. Odd one out :

Copper, cotton, wood, plastic.

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9. How we are different? :

Conduction and convection of heat.

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10. How we are different? :

Conduction and radiation of heat.

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11. Answer in one sentence :

How does the solar heat reach the earth?

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12. Answer the following question in one sentence:

What are the modes of heat transfer?

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13. Answer in one sentence :

For what purpose vacuum is created between two tubes of thermos flask?

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14. Answer the following question in one sentence:

How does a fever get lowered with cold compress on forehead of a patient?

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15. Answer the following question:

Why do we hold a steel glass in a handkerchief while drinking hot milk from it? What are other examples of this kind?

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16. Answer the following :

Why does the heat in the water, heated to building, slowly decrease once it is taken off the flame? Where does this heat go?

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17. Answer the following :

What are convection currents?

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18. Answer the question in short:

Explain which mode of heat transfer causes sea breezes and land breezes?

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19. Answer the question in short:

Which one of these will absorb the heat? Steel spoon, wooden board,glass,vessel,iron,griddle(tava),glass, wooden spoon, plastic plate,soil,water,wax.

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20. Answer the following question:

Why does the halwai wrap up clothes around

the end of his slotted spoon while stirring the building milk in his large kadhai?

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21. Answer the question in short:

Why heaters fitted near the floor and air conditioners near the ceiling in a room?

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22. Give scientific reasons:

Dew drops are formed on the grass in winter.

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23. Answer the question in short:

Why are the houses in Rajasthan painted white?

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24. Answer the question in short:

Why is the outer coat of penguins of Antarctica black?

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25. Use your brain power:

Why do we wear woolen clothes in winter?

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26. Use your brain power:

Why do we use white clothes in summer and dark or black clothes in winter?

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27. Give scientific reasons:

In winter why does an iron pillar feel colder than a wooden pole?

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28. Give scientific reasons:

An ordinary glass bottle cracks when boiling water is poured into it.but a borosil glass bottle does not.

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29. Give scientific reasons:

The telephone wires which sag in summer become straight in winter.

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30. Use your brain power:

Why is there a gap at the joints of rails and of cement concrete bridges?

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31. Use your brain power:

Why is mercury or alcohol used in a thermometer?

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32. Give reason :

Why does a hot substance not remain hot after two or three hours in a thermos flask?

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33. Rub your palms against each other and put them on your cheeks. What do you feel?

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34. Apparatus: Bars of stainless steel, aluminium and copper, a candle, a burner, pins, etc. :

Procedure: Take stainless steel (or iron), copper and aluminium bars, each about 30 cm long and having the same shape. Apply wax spots with the help of candle at a distance of 2 cm from each other on all the three bars. Stick a pin in each of these spots so that it is upright. Now insert the ends of all three bars into a flame at the same time. for a while.

What do you see? From which bar do the pins start falling first? Why?

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35. Apparatus: A beaker, potassium permaganate crystals, a burner, water, etc. :

Procedure: Take some water in a beaker. Heat the beaker slowly on a gas burner. Drop a few crystals of potassium permaganate into the water. Now watch the water in the beaker carefully. What do you see?

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36. Light a candle and stand it upright. Hold your hands on its two sides at some distance from the candle. Bring them closer. :

What do you feel?

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37. Light a candle and stand it upright. Hold your hands on its two sides at home distance from the candle. Bring them closer. :

Have you warmed yourself near a bonfire or in the morning sun in winter?

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38. Apparatus: Two aluminium tins of the same size, two small galsses, water, thermometers, black paint, etc. :

Procedure: Paint the outer surface of one tin black paint, and let it dry. Then in both tins, place one glass, each filled with water at the same temperature. cover the tins with lids.

Keep them in the sun for two hours. Now measure the temperature of the water in the glasses in the two tins. What is the reason for the difference in the temperature?

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39. Apparatus: Glass bottle, baloon, hot water, etc. :

Procedure: Fix a balloon on the mouth of a glass bottle. Hold this bottle in hot water. What happens?

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40. Answer the question in short:

What is meant by thermoware?

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41. Oral Work :

What is conduction of heat?

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42. Oral Work :

What will happen when only upper part of liquid is heated?

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43. Oral Work :

How does the heat of the sun reach us?

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44. Oral Work :

How can we see objects at night using infrared camera?

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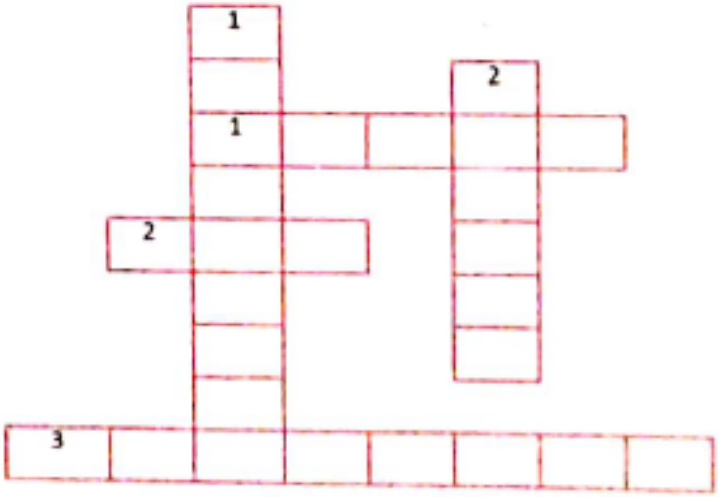
45. Solve the following crossword puzzle. :

Across:

Thermos flask was invented by scientist

..... in 1892.



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46. Project :

Make a note of the various example of heat transfer seen in day-to-day life.

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47. Fill in the blanks. :

..... (Transfer/Convention) of heat means the flow of heat from one place to another.

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48. Fill in the blanks. :

The ability of a substance to absorb heat radiation depends on its ..... (colour/shape).

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49. Answer in one word. :

In which of the substances does condition occur?

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50. Answer in one word. :

Which material is used as a coating on inner walls of a thermos flask?

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51. Answer in your own words. :

Explain what happens when a liquid is heated.

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52. Answer in your own words. :

Explain how temperature of the substance kept in the thermos flask is maintained.

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53. Answer in your own words. :

Why refrigerator have freezers placed at the top?

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