PHYSICS

BOOKS - SURA PHYSICS (TAMIL ENGLISH)

Heat

Example

1. When an oject is heated, the molecules that make up the object

A. begin to move faster

B. lose energy

C. become heavier

D. become lighter

Answer:

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2. The unit of heat is

A. newton

B. joule

C. volt

D. celsius

Answer:

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3. One litre of water at $30^{\circ} C$is mixed with one liter of water at$50^{\circ} C$.The tempertature of the mixture will be

A. `80^@C

B. More then 50° but less than 80°

C. $20^\circ C$

D. around $40^\circ C$

Answer:

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4. An iron ball at $50^\circ C$ is dropped in a mug containing water at $50^\circ C$ .The temperature of the mixture will be

A. flow from iron ball to water.

B. not flow from iron ball water or from water to iron ball.

C. flow from water to iron ball.

D. increase the temperature of both.

Answer:

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5. Heat flows from a___body to a___body.

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6. The hotnes of ther object is determined by its___

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7. SI unit of temperature is

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8. Solids___on heating and ___on cooling.

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9. Two bodies are said to be in the state of thermal___if there in no transfer of heat taking place.

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10. True or False. If false, give the correct statement: Heat is a kind of energy that flows from a hot body to a cold body.

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11. True or False. Steam is formed when heat is released from water.

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12. True or False. Thermal expansion is always a nuisance.

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13. True or False. Borosilcate glass do nio expand much on being heated.

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14. True or False. The unit of heat and temperature are the same.

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15. An ordinary glass bottle cracks when boilling water is poure into it,but a borosilicate glass bottle does not.

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16. The electric wire which sag in summer become straght in winter.

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17. Rivet is heated before fixing in hole to join two metal plates.

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18. Match the following:

1. Heat	0°C
2. Temperature	100°C
3. Thermal Equilibrium	kelvin
4. Ice cube	No heat flow
5. Boiling water	joule

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19. Complete the given analogy:

Heat : Joule :: Temperature____>

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20. Analogy: Ice cube :$0^{\circ} C$ ::Boiling water:_____

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21. Analogy: Total Kinctic Energy of molecules:Heat::Average Kinetic Energy:___

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22. Make a lost of electrical equipm ents at home which we get heat from.

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23. What is temperature?

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24. What is thermal expansion?

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25. What do you understand by thermal equilibirium?

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26. What diference do you think heating the solid will make in their molecules?

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27. Distinguish between heat and temperature.

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28. Explain thermal expansion with suitable examples.

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29. When a window is accidentally lefty open on a winter night,will you fell uncomfortable

because the cold is getting in, or because ther heat is escaping from the room?

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30. Suppose your normal body temperaturfe were lower then what it is. How would the sensation of hot and cold change?

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31. If you heat a circular disk with a hole , what chang do you expect in the diameter of the hole? Remember that the effect of heating increases ther separation between any pair of particles.

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32. We reduce the heat by adding___while preparing fruit juice.

A. sugar

B. lime

C. ice cubes

D. salt

Answer:

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33. One day in 1922,the air temperature was measured at `59^@Cin the shade in Libya___.

A. America

B. Africa

C. Antarctica

D. Europe

Answer:

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34. Our normal body temperature is___.

A. `34^@C

B. `36^@C

C. $35^{\circ} C$

D. $37^{\circ} C$

Answer:

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35. Temperature determines the direction of flow of _____.

A. heat energy

B. kinctic energy

C. potential energy

D. light energy

Answer:

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36. _____exists when two objects in thermal contact no longer affectg each other's temperature.

A. Themal expansion

B. Themal equilibrium

C. average temperature

D. coolines

Answer:

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37. Fill in the blanks: We fell heat on our body when the ___shines.

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38. Fill in the blanks: ____energy can be generated by the burning og fuels like coal, wood ,charcal,gasoline etc.

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39. Fill in the blanks: When ___flows through a conductor , heat energy is produced.

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40. Fill in the blanks: ____is a form of energy.

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41. Temperature determines the direction of flow of _____.

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42. Fill in the blanks: The coldest temperature in the world was measured in the ___continent.

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43. Fill in the blanks: Temperature measures the ___kinetic energy of molecules.

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44. True or False .If false , give the correct statement: The sun give uis light and heat.

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45. True or False .If false , give the correct statement: We can absorb heat by rubbing two surffaces of some substances.

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46. True or False .If false , give the correct statement: In the past people used to rub two wooden pieces together to light fire.

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47. True or False .If false , give the correct statement: When we cool the object the temperature of the object will be increased.

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48. True or False .If false , give the correct statement: Two objects are said to be in thermal contact if they can exchange heat energy.

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49. True or False .If false , give the correct statement: The expansion in volume is called linear expansion.

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50. Match the following:

1. Source of heat	a)	heat energy
2. Electric current	b)	calorie
3. Gasoline	c)	37°C
4. Unit of heat	d)	Electric kettle
5. Human body temperature	e)	sun

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51. Analogy: Movement of molecules:Heat. Heat energy:_____

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52. Analogy: Expansion is length:Linear expansion. Expansion in volume:_____

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53. Analogy: Ordinary glass: Glass tumbler. Pyrex glass____

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54. How can heat energy be generated?

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55. Define -heat.

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56. What are the units of heat used?

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57. What are the measuring unit of temperature?

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58. Define -Caloric.

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59. What is thermal expansion ?

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60. Differentiate linear expansion and cubical expansion.

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61. How solid are expanded on heating?

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62. How heat energy is transferred?

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63. What type of glassware is used in laboratories?Why?

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64. List nad describe the sources of heat.

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Exercise

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B. loose energy

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Answer:

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B. `36^@C

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4. ____exists when two objects in thermal contact no longer affectg each other's temperature.

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B. Thermal equilibrium

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6. Fill in the blanks: ____energy can be generated by the burning og fuels like coal, wood ,charcal,gasoline etc.

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8. Find whether the following sentences are true or false.If false correct the statement. We can absorfb heat byh rubbing two surfaces of some subastances.

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11. Rivet is heated before fixing in hole to join two metal plates.

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12. What is thermal expansion?

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13. Given reason : Heat :joule: Temp,erature:___,

b) Ice cube:$0^{\circ} C$:Boiling water:____

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14. Matching.

(i)	Thermal equilibrium	a)	Electric kettle
(ii)	Source of heat	b)	Laboratory glasswares
(iii)	Electric current	c)	No heat flow
(iv)	Pyrex glass	d)	Sun

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15. Define-Carlorie.

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16. What type of glassware is used in laboratories?Why?

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19. Explain thermal expansion with suitable examples.

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