



BIOLOGY

NCERT - NCERT BIOLOGY(HINGLISH)

NATURAL RESOURCES

Now Answer

1. Measure the temperature of the following:-
Take (i) a beaker full of water, (ii) a beaker full of soil/sand and (iii) a closed bottle containing

a thermometer. Keep them in bright sunlight for three hours. Now measure the temperature of all 3 vessels. Also, take the temperature reading in shade at the same time.

Is the temperature reading more in activity (i) or (ii)?



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2. Measure the temperature of the following:-

Take (i) a beaker full of water, (ii) a beaker full

of soil/sand and (iii) a closed bottle containing a thermometer. Keep them in bright sunlight for three hours. Now measure the temperature of all 3 vessels. Also, take the temperature reading in shade at the same time.

Based on the above finding, which would become hot faster – the land or the sea?



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3. Measure the temperature of the following:-

Take (i) a beaker full of water, (ii) a beaker full of soil/sand and (iii) a closed bottle containing a thermometer. Keep them in bright sunlight for three hours. Now measure the temperature of all 3 vessels. Also, take the temperature reading in shade at the same time.

Is the thermometer reading of the temperature of air (in shade) the same as the temperature of sand or water? What do you think is the reason for this? And why does the

temperature have to be measured in the shade?



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4. Measure the temperature of the following:-

Take (i) a beaker full of water, (ii) a beaker full of soil/sand and (iii) a closed bottle containing a thermometer. Keep them in bright sunlight for three hours. Now measure the temperature of all 3 vessels. Also, take the temperature reading in shade at the same

time.

Is the temperature of air in the closed glass vessel/bottle the same as the temperature taken in open air? (i) What do you think is the reason for this? (ii) Do we ever come across this phenomenon in daily life?



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5. Take an empty bottle of the sort in which bottled water is sold. Pour about 5-10 mL of water into it and close the bottle tightly. Shake

it well or leave it out in the Sun for ten minutes. This causes the air in the bottle to be saturated with water vapour. • Now, take a lighted incense stick. Open the cap of the bottle and allow some of the smoke from the incense stick to enter the bottle. Quickly close the bottle once more. Make sure that the cap is fitting tightly. Press the bottle hard between your hands and crush it as much as possible. Wait for a few seconds and release the bottle. Again press the bottle as hard as you can. When did you observe that the air inside seemed to become 'foggy'?



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6. Take an empty bottle of the sort in which bottled water is sold. Pour about 5-10 mL of water into it and close the bottle tightly. Shake it well or leave it out in the Sun for ten minutes. This causes the air in the bottle to be saturated with water vapour. • Now, take a lighted incense stick. Open the cap of the bottle and allow some of the smoke from the incense stick to enter the bottle. Quickly close the bottle once more. Make sure that the cap

is fitting tightly. Press the bottle hard between your hands and crush it as much as possible.

Wait for a few seconds and release the bottle.

Again press the bottle as hard as you can.

When does this fog disappear?



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7. Take an empty bottle of the sort in which bottled water is sold. Pour about 5-10 mL of water into it and close the bottle tightly. Shake it well or leave it out in the Sun for ten

minutes. This causes the air in the bottle to be saturated with water vapour. • Now, take a lighted incense stick. Open the cap of the bottle and allow some of the smoke from the incense stick to enter the bottle. Quickly close the bottle once more. Make sure that the cap is fitting tightly. Press the bottle hard between your hands and crush it as much as possible. Wait for a few seconds and release the bottle. Again press the bottle as hard as you can. When is the pressure inside the bottle higher?



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8. Take an empty bottle of the sort in which bottled water is sold. Pour about 5-10 mL of water into it and close the bottle tightly. Shake it well or leave it out in the Sun for ten minutes. This causes the air in the bottle to be saturated with water vapour. • Now, take a lighted incense stick. Open the cap of the bottle and allow some of the smoke from the incense stick to enter the bottle. Quickly close the bottle once more. Make sure that the cap is fitting tightly. Press the bottle hard between your hands and crush it as much as possible.

Wait for a few seconds and release the bottle.

Again press the bottle as hard as you can.

Is the 'fog' observed when the pressure in the bottle is high or when it is low?



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9. Take an empty bottle of the sort in which bottled water is sold. Pour about 5-10 mL of water into it and close the bottle tightly. Shake it well or leave it out in the Sun for ten minutes. This causes the air in the bottle to be

saturated with water vapour. • Now, take a lighted incense stick. Open the cap of the bottle and allow some of the smoke from the incense stick to enter the bottle. Quickly close the bottle once more. Make sure that the cap is fitting tightly. Press the bottle hard between your hands and crush it as much as possible. Wait for a few seconds and release the bottle. Again press the bottle as hard as you can. What is the need for smoke particles inside the bottle for this experiment?



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10. Take an empty bottle of the sort in which bottled water is sold. Pour about 5-10 mL of water into it and close the bottle tightly. Shake it well or leave it out in the Sun for ten minutes. This causes the air in the bottle to be saturated with water vapour. • Now, take a lighted incense stick. Open the cap of the bottle and allow some of the smoke from the incense stick to enter the bottle. Quickly close the bottle once more. Make sure that the cap is fitting tightly. Press the bottle hard between your hands and crush it as much as possible.

Wait for a few seconds and release the bottle.

Again press the bottle as hard as you can.

What might happen if you do the experiment without the smoke from the incense stick?

Now try it and check if the prediction was correct. What might be happening in the above experiment in the absence of smoke particles?



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11. Select and mark out a small area (about 1 m²) in some unused land in or near your school. As in the above activity, count the number of different animals and plants in this area and the number of individuals of each species. Remember to do this in the same place twice in a year, once during summer or the dry season and once after it has rained.

Where the numbers similar both times?



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12. In which season did you find more variety of plants and animals?



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13. In which season did you find more number of individuals of each variety?



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Exercise

1. How is our atmosphere different from the atmospheres on Venus and Mars?



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2. How does the atmosphere act as a blanket?



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3. What causes winds?



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4. How are clouds formed?



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5. List any three human activities that you think lead to air pollution.



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6. Do you know of any activity which may be polluting this water source?



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7. How is soil formed?



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8. What is soil erosion?



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9. What are the methods of preventing or reducing soil erosion?



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10. What are the different states in which water is found during the water cycle?



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11. Name two biologically important compounds that contain both oxygen and nitrogen.



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12. List any three human activities which would lead to an increase in the carbon dioxide content of air.



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13. What is the greenhouse effect?



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14. What are the two forms of oxygen found in the atmosphere?



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15. Why is the atmosphere essential for life?



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16. Why is water essential for life?



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17. We know that many human activities lead to increasing levels of pollution of the air, water-bodies and soil. Do you think that isolating these activities to specific and limited areas would help in reducing pollution?



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18. Write a note on how forests influence the quality of our air, soil and water resources.



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19. How are living organisms dependent on the soil ? Are organisms that live in water totally independent of soil as a resource?



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20. You have seen seather reposts on television and in neqapapers. How do you think are able to predict the weather?



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Questions

1. What is the major source of fresh water in the city/town/village where you live?



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