



**ÉCOLE GLOBALE**  
INTERNATIONAL GIRLS SCHOOL  
Dehradun

**Holiday home work**

**Summer break 2018-19**

**Class- VII**

**Subject- Science**

**BIOLOGY**

A. Answer the following questions in holiday homework notebook:

1. Describe the passage of water molecule from the soil, up the transpiration stream, to mixing with other air particles as vapour.
2. Describe the structure and working of root hair along with the diagram.
3. Define the given terms:
  - a. Chloroplast
  - b. Biomass
  - c. Respiration
  - d. Transpiration
4. Describe the transporting tissues of a plant along with their diagrams.

NOTE: Make colourful and well labelled diagrams wherever relevant.

B. Make a poster (on a pastel sheet of A4 size) on any revolutionary invention in science. Stick pictures related to the invention and the inventor. Show your creativity to make the poster look attractive.

NOTE: Use light coloured pastel sheet for making poster.

C. Project work: Adaptations in plants and animals

Project work is to be done in a scrap book (one side coloured and one side ruled). Paste colourful pictures and give at least three adaptive features of each of the following:

1. Five desert plants and five desert animals.
2. Five aquatic plants and five aquatic animals.

**CHEMISTRY**

**1. Which of the following is a strong acid?**

- a. Nitric acid
- b. Citric acid
- c. Tartaric acid
- d. Acetic acid

**2. What is the common name of sodium carbonate?**

- a. Caustic soda
- b. Baking soda
- c. Phenol
- d. Blue vitriol

**3. Which one of the following metal does not release hydrogen gas with acids?**

- a. Iron
- b. Copper
- c. Zinc
- d. Magnesium

**4. Sodium chloride turns**

- a. Blue litmus red
- b. Red litmus blue
- c. Methyl orange yellow
- d. No change in colour

**5. Reaction between acid and base to form salt is called**

- a. Combination reaction
- b. Neutralization reaction
- c. Decomposition reaction
- d. Addition reaction

**6. Which of the following is a natural indicator?**

- a. Methyl orange
- b. Phenolphthalein
- c. Turmeric
- d. Oxalic acid.

**7. In case of indigestion, we use**

- a. Antacids
- b. Antipyretic
- c. Antibiotic
- d. Alcohols

**8. All acids contain**

- a. Oxygen
- b. Nitrogen
- c. Carbon
- d. Hydrogen

**9. Acids are**

- a. Sour in taste
- b. Sweet in taste
- c. Salty in taste
- d. Bitter in taste

**10. Bases are**

- a. Sour in taste
- b. Sweet in taste
- c. Salty in taste
- d. Bitter in taste

**11. The substances that are used to test whether a substance is acidic or basic is called**

- a. Indicator
- b. Acid
- c. Base
- d. Salt

**12. Give the chemical name of Lime water**

- a. Calcium hydroxide
- b. Magnesium hydroxide
- c. Ammonium hydroxide
- d. Sodium hydroxide

**13. Give the chemical name of Milk of magnesia**

- a. Calcium hydroxide
- b. Magnesium hydroxide
- c. Ammonium hydroxide
- d. Sodium hydroxide

**14. Give the chemical name of Window cleaner**

- a. Calcium hydroxide
- b. Magnesium hydroxide
- c. Ammonium hydroxide
- d. Sodium hydroxide

**15. Litmus paper (purple colour) in distilled water when added to an acid changes to**

- a. Red
- b. Blue
- c. Green
- d. Violet

**16. The solutions which do not change the colour of either red or blue litmus are known as**

- a. Acid Solutions
- b. Base Solutions
- c. Neutral Solutions
- d. Indicator

**17. Find the natural indicator from the following**

- a. China Rose
- b. Vinegar
- c. Phenolphthalein
- d. Methyl Orange

18. Phenolphthalein gives \_\_\_\_\_ colour in acid medium

- a. Pink
- b. Colourless
- c. Green
- d. Red

19. The sting of an ant contains \_\_\_\_\_.

- a. Hydrochloric acid
- b. Formic acid
- c. sulphuric acid
- d. Ethanoic acid

20. The effect of sting of an ant can be neutralised by rubbing with

- a. Calcium carbonate
- b. Sodium Carbonate
- c. Sodium hydrogen carbonate
- d. Calcium chloride

21. What are indicators? Give two examples.

22. Define neutralization.

23. Explain why rusting of iron is a chemical change.

24. Acid rain is acidic because of what ? Explain.

25 .Lime water turns milky when carbon dioxide is passed through it .Explain why? Give chemical equations for the same.

#### **PROJECTS AND ACTIVITIES –**

1. Make a project on any two of the following on A4 pastel sheet. Paste relevant pictures.
  - (a) Digestive System
  - (b) Nutrients in food
  - (c) Photosynthesis
  - (d) Food chain
  - (e) Deficiency diseases
2. Prepare a beautiful card using turmeric powder paste and soap solution –refer to Activity 5.2 ( pg 51) of chemistry text book. Record your activity in your HHW note book.
3. Visit a doctor. Find out the medicines he prescribes to treat acidity. Ask him how acidity can be prevented. Write a detailed report about your conversation with the doctor.
4. On a map of India ,draw the rain map ( refer pg 200 of text book ). Paste the map in Holiday homework notebook.

## PHYSICS

1. State similarities and differences between the laboratory thermometer and the clinical thermometer.
2. Give two examples each of conductors and insulators of heat.
3. Fill in the blanks :
  - (a) The hotness of an object is determined by its \_\_\_\_\_.
  - (b) Temperature of boiling water cannot be measured by a \_\_\_\_\_ thermometer.
  - (c) Temperature is measured in degree \_\_\_\_\_.
  - (d) No medium is required for transfer of heat by the process of \_\_\_\_\_.
  - (e) A cold steel spoon is dipped in a cup of hot milk. It transfers heat to its other end by the process of \_\_\_\_\_.
  - (f) Clothes of \_\_\_\_\_ colours absorb heat better than clothes of light colours.
4. Match the following :
  - (i) Land breeze blows during (a) summer
  - (ii) Sea breeze blows during (b) winter
  - (iii) Dark coloured clothes are preferred during (c) day
  - (iv) Light coloured clothes are preferred during (d) night
5. Discuss why wearing more layers of clothing during winter keeps us warmer than wearing just one thick piece of clothing .
6. Look at Fig. given below Mark where the heat is being transferred by conduction, by convection and by radiation.



7. In places of hot climate it is advised that the outer walls of houses be painted white. Explain.

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

- (a)  $80^{\circ}\text{C}$
- (b) more than  $50^{\circ}\text{C}$  but less than  $80^{\circ}\text{C}$
- (c)  $20^{\circ}\text{C}$
- (d) between  $30^{\circ}\text{C}$  and  $50^{\circ}\text{C}$

9. An iron ball at  $40^{\circ}\text{C}$  is dropped in a mug containing water at  $40^{\circ}\text{C}$ . The heat will

- (a) flow from iron ball to water.
- (b) not flow from iron ball to water or from water to iron ball.
- (c) flow from water to iron ball.
- (d) increase the temperature of both.

10. A wooden spoon is dipped in a cup of ice cream. Its other end

- (a) becomes cold by the process of conduction.
- (b) becomes cold by the process of convection.
- (c) becomes cold by the process of radiation.
- (d) does not become cold.

11. Stainless steel pans are usually provided with copper bottoms. The reason for this could be that

- (a) copper bottom makes the pan more durable.
- (b) such pans appear colourful.
- (c) copper is a better conductor of heat than the stainless steel.
- (d) copper is easier to clean than the stainless steel.

### **Additional Questions**

1. A marble tile would feel cold as compared to a wooden tile on a winter morning, because the marble tile

- (a) is a better conductor of heat than the wooden tile.

(b) is polished while wooden tile is not polished.

(c) reflects more heat than wooden tile.

(d) is a poor conductor of heat than the wooden tile.

2. A beggar wrapped himself with a few layers of newspaper on a cold winter night. This helped him to keep himself warm because

(a) friction between the layers of newspaper produces heat.

(b) air trapped between the layers of newspaper is a bad conductor of heat.

(c) newspaper is a conductor of heat.

(d) newspaper is at a higher temperature than the temperature of the surrounding.

3. Paheli and Boojho measured their body temperature. Paheli found her's to be 98.6 °F and Boojho recorded 37°C. Which of the following statement is true?

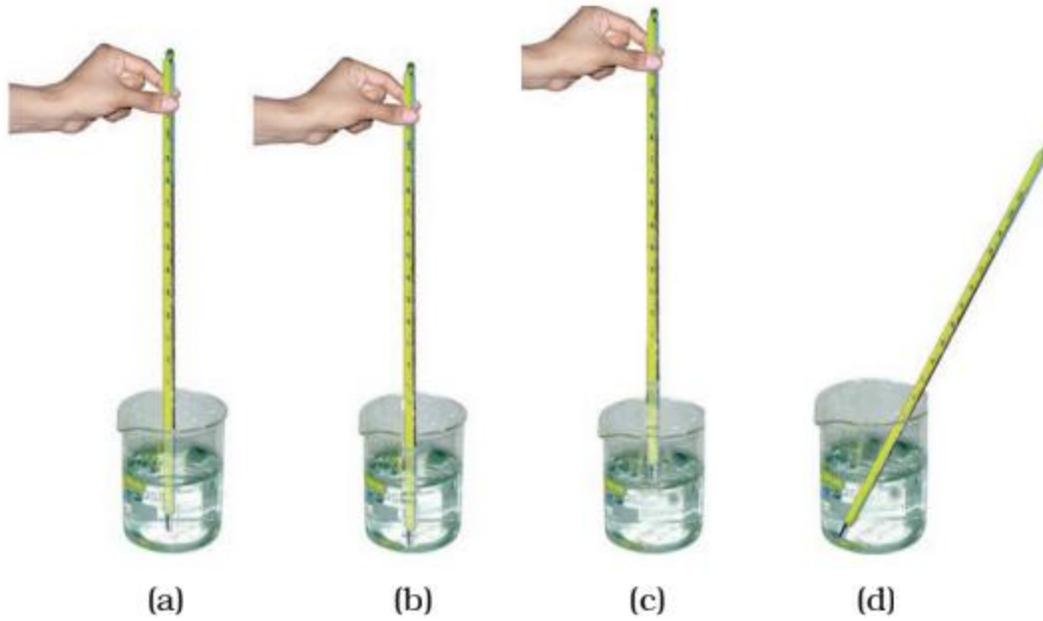
(a) Paheli has a higher body temperature than Boojho.

(b) Paheli has a lower body temperature than Boojho.

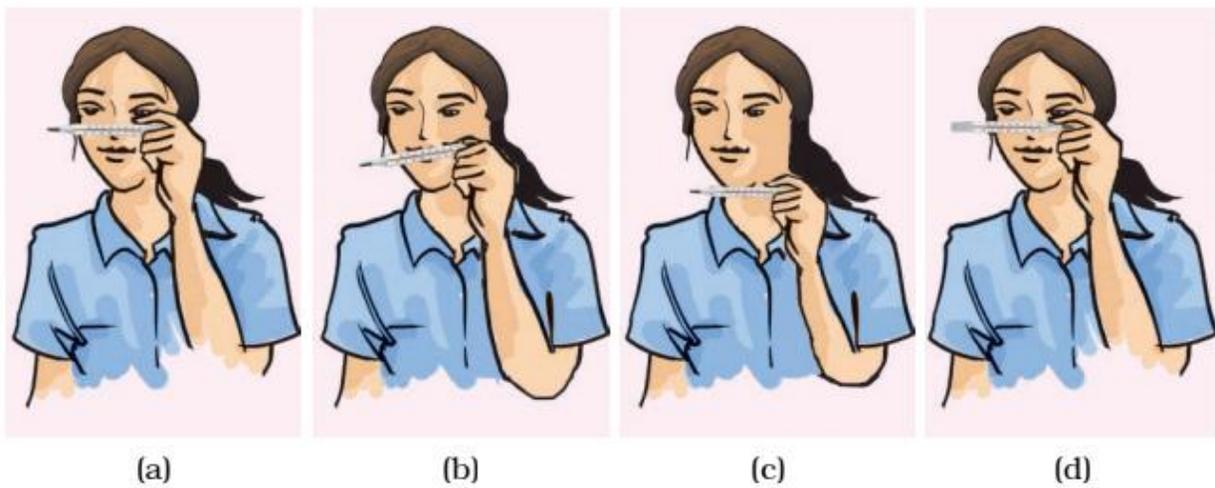
(c) Both have normal body temperature.

(d) Both are suffering from fever.

4. Four arrangements to measure temperature of ice in beaker with laboratory thermometer are shown in Figure 4.2 (a, b, c and d). Which one of them shows the correct arrangement for accurate measurement of temperature?

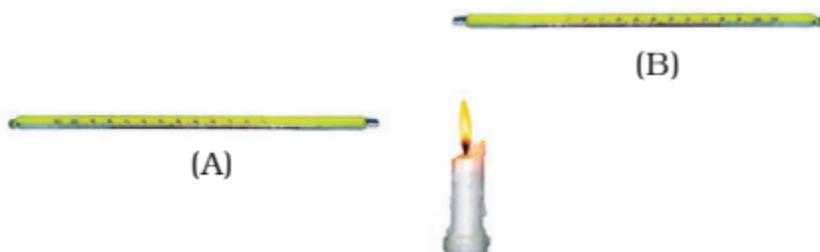


5. Fig 4.3 (a–d) shows a student reading a doctor's thermometer. Which of the figure indicates the correct method of reading temperature?



6. Shopkeepers selling ice blocks usually cover them with jute sacks. Explain why.

7. A laboratory thermometer A is kept 7 cm away on the side of the flame while a similar thermometer B is kept 7 cm above the flame of a candle as shown in Figure



8. Which of the thermometers, A or B, will show a greater rise in temperature? Give reason for your answer. To keep her soup warm Paheli wrapped the container in which it was kept with a woollen cloth. Can she apply the same method to keep a glass of cold drink cool? Give reason for your answer.

9. In a mercury thermometer, the level of mercury rises when its bulb comes in contact with a hot object. What is the reason for this rise in the level of mercury?

10. For setting curd, a small amount of curd is added to warm milk. The microbes present in the curd help in setting if the temperature of the mixture remains approximately between  $35^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ . At places, where room temperature remains much below the range, setting of curd becomes difficult. Suggest a way to set curd in such a situation.

11. You may have noticed that a few sharp jerks are given to clinical thermometer before using it. Why is it done so?

12. Why is it advised not to hold the thermometer by its bulb while reading it?

13. At a camp site there are tents of two shades – one made with black fabric and the other with white fabric. Which one will you prefer for resting on a hot summer afternoon? Give reason for your choice. Would you like to prefer the same tent during winter?

14. While constructing a house in a coastal area, in which direction should the windows preferably face and why?