



ÉCOLE GLOBALE

INTERNATIONAL GIRLS' SCHOOL

Dehradun

HOLIDAY HOMEWORK - CLASS IX B BIOLOGY

IMPROVEMENT IN FOOD RESOURCES

1. Differentiate between compost and vermicompost?
2. Arrange these statements in correct sequence of preparation of green manure.
 - (a) Green plants are decomposed in soil.
 - (b) Green plants are cultivated for preparing manure or crop plant parts are used.
 - (c) Plants are ploughed and mixed into the soil.
 - (d) After decomposition it becomes green manure.
3. An Italian bee variety *Apis mellifera* has been introduced in India for honey production. Write about its merits over other varieties.
4. Discuss various methods for weed control.
5. Differentiate between the following
 - (i) Capture fishery and Culture fishery
 - (ii) Mixed cropping and Inter cropping
 - (iii) Bee keeping and Poultry farming
6. What do you understand by composite fish culture?
7. Write the modes by which insects affect the crop yield.
8. Discuss why pesticides are used in very accurate concentration and in very appropriate manner?
9. Name two types of animal feed and write their functions.
10. What would happen if poultry birds are larger in size and have no summer adaptation capacity? In order to get small sized poultry birds, having summer adaptability, what method will be employed?

CELL-THE FUNDAMENTAL UNIT OF LIFE

1. Why are lysosomes known as 'suicide-bags' of a cell?
2. Do you agree that "A cell is a building unit of an organism". If yes, explain why?
3. Why does the skin of your finger shrink when you wash clothes for a long time?
4. Why is endocytosis found in animals only?
5. A person takes concentrated solution of salt, after sometime, he starts vomiting. What is the phenomenon responsible for such situation?
6. Name any cell organelle which is non membranous.
7. If you are provided with some vegetables to cook. You generally add salt into the vegetables during cooking process. After adding salt, vegetables release water. What mechanism is responsible for this?

8. If cells of onion peel and RBC are separately kept in hypotonic solution, what among the following will take place? Explain the reason for your answer.
- (a) Both the cells will swell.
 - (b) RBC will burst easily while cells of onion peel will resist the bursting to some extent.
 - (c) a and b both are correct.
 - (d) RBC and onion peel cells will behave similarly.
9. Draw a neat and labelled diagram of an animal cell.
10. Draw a well labelled diagram of an eukaryotic nucleus. How is it different from nucleoid?

TISSUES

1. Differentiate between sclerenchyma and parenchyma tissues. Draw well labelled diagram.
2. Describe the structure and function of different types of epithelial tissues. Draw diagram of each type of epithelial tissue.
3. Draw well labelled diagrams of various types of muscles found in human body.
4. Give reasons for
 - (a) Meristematic cells have a prominent nucleus and dense cytoplasm but they lack vacuole.
 - (b) Intercellular spaces are absent in sclerenchymatous tissues.
 - (c) We get a crunchy and granular feeling, when we chew pear fruit.
 - (d) Branches of a tree move and bend freely in high wind velocity.
 - (e) It is difficult to pull out the husk of a coconut tree.
5. List the characteristics of cork. How are they formed? Mention their role.
6. Why are xylem and phloem called complex tissues? How are they different from one other?
7. Differentiate between
 - (a) Meristematic and permanent tissues in plants
 - (b) Define the process of differentiation
8. Water hyacinths float on water surface. Explain.
9. Fill in the blanks
 - (a) Lining of blood vessels is made up of——.
 - (b) Lining of small intestine is made up of ——.
 - (c) Lining of kidney tubules is made up of——.
 - (d) Epithelial cells with cilia are found in——of our body.
10. Draw and explain neuron.

DIVERSITY IN LIVING ORGANISMS

1. Classify the following organisms based on the absence/presence of true coelom (i.e., acoelomate, pseudocoelomate and coelomate)
Spongilla, Sea anemone, Planaria, Liver fluke Wuchereria, Ascaris, Nereis, Earthworm, Scorpion, Birds, Fishes, Horse.
2. Endoskeleton of fishes are made up of cartilage and bone; classify the following fishes as cartilagenous or bony

Torpedo, Sting ray, Dog fish, Rohu, Angler fish, Exocoetus.

3. Classify the following based on number of chambers in their heart.
4. Rohu, Scoliodon, Frog, Salamander, Flying lizard, King Cobra, Crocodile, Ostrich, Pigeon, Bat, Whale
5. Classify Rohu, Scoliodon, Flying lizard, King Cobra, Frog, Salamander, Ostrich, Pigeon, Bat, Crocodile and Whale into the cold blooded/warm blooded animals.
6. Name two egg laying mammals.
7. Thallophyta, bryophyta and pteridophyta are called as 'Cryptogams'. Gymnosperms and Angiosperms are called as 'phanerogams'. Discuss why? Draw one example of Gymnosperm.
8. Define the terms and give one example of each
 - (a) Bilateral symmetry
 - (b) Coelom
 - (c) Triploblastic
9. You are given leech, Nereis, Scolopendra, prawn and scorpion; and all have segmented body organisation. Will you classify them in one group? If no, give the important characters based on which you will separate these organisms into different groups.
10. Fill in the boxes given in Fig. 7.2 with appropriate characteristics/plant group (s)

