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HOLIDAY HOMEWORK
Class X A and X B (SCIENCE)

- Learn Chapter 1, 6 And 10
- Worksheet on Chapter 1 and Chapter 6
- **Prepare presentation on**
 - 1) Autotrophic nutrition in plants
 - 2) Nutrition in Human Beings
 - 3) transportation in human being
 - 4) Excretion in human being

(1) Life Processes
1 Mark Questions

1. After a vigorous exercise, you may experience cramps in your leg muscles. Why does this happens?
2. What do the following transport?
 - a) Xylem b) Phloem
3. What do the following transport?
 - a) Pulmonary Vein b) Vena Cava
4. Although bile juice has no digestive enzyme it is considered to be very important during digestion of food. Give reason.
5. What do you mean by life processes?
6. What are outside raw materials used for by an organism?
IWhat processes would you consider essential for maintaining life?
7. Define autotrophic nutrition.
8. Define heterotrophic nutrition.
9. How does amoeba obtain its food?
10. Name the site where complete digestion of carbohydrate, protein and fats takes place?
11. What is the name of respiratory pigment?
12. What is the role of HCL in stomach?
13. Name any two glands associated with digestion in humans.
14. Write down the complete reaction of photosynthesis.

15. What is the role of mucus produced by stomach?
16. In which form nitrogen is taken?
17. Which is an essential element used in the synthesis of proteins and other compounds?
18. How is food taken inside paramecium?
19. Which type of movement occurs in the food pipe through which food enters into the stomach?
20. What will happens when we eat more spicy food?
21. The exit of food from stomach is regulated by which muscle?

22. Which is the longest part of alimentary canal?
23. What is the role of bile?
24. What is the role of intestinal juice?
25. The exit of waste materials regulated by which muscles?
26. Why respiration is called as exothermic reaction?
27. How ATP is synthesized?
28. Which is the energy currency of cellular process?
29. What is the role of rings of cartilage in the throat?
30. What is the function of alveoli?
31. What are the end products of aerobic and anaerobic respiration in yeast?
32. What is the fluid medium of blood?
33. What is the role of platelets?
34. What are the different components of blood?
35. Name the instrument used to measure blood pressure?
36. Why WBC is called soldier of the body?
37. What is lymph?
38. Define excretion.
39. What is the role of saliva in digestion of food?
40. What is the role of mucous in stomach?

L 1 (3 Mark)

1. How are Arteries different from vein. State any three differences.
2. What do the following transport?
 - i) Xylem – **Transport water and minerals in plants.**
 - ii) Pulmonary artery – **Transport deoxygenated blood from lungs to heart.**
 - iii) Pulmonary Vein – **Transport oxygenated blood from heart to lungs.**
 - iv) Phloem – Transport **Synthesized food and hormones** in plants
 - v) Vena Cava - **Deoxygenated blood from the body to the upper chamber of heart (Right atrium).**
 - vi) Ureter – **Urine from kidney to urinary bladder**
3. Differentiate between aerobic and anaerobic respiration?
Name anyone organism that use anaerobic mode of respiration.
4. What is transpiration? How does transpiration helpful for the plant?
5. Which organ secretes a hormone when blood sugar rises in our body?
Name the hormone and any one enzyme released by this organ.

L 2 (3 Mark)

6. Where do plants get each of the raw materials required for photosynthesis?
7. How is small intestine designed to absorb the digested food?
8. a) What is the role of mucus in stomach?

- b) How exit of food from the stomach is regulated?
 c) Where does food enter from stomach?.
9. What will happen if
 a) Peristaltic movements do not occur all along the oesophagus?
 b) There is no platelets in blood?
 c) Rings of cartilage are not present in the trachea?
10. What are the major events during photosynthesis?

L 3 (3 Mark)

11. a) A product is formed in our muscles due to break down of glucose when there is lack of oxygen. Name the product and also mention the effect of build up of this product.
 b) Where does the breakdown of pyruvate to give CO₂, water and energy takes place?
12. Give reasons for:
 a) Oxygenated and deoxygenated blood is separate in the heart of mammals.
 b) Ventricles have thick muscular wall.
 c) Herbivores have longer intestine as compare to carnivores
13. What are the methods used by plants to get rid of excretory products
- 14.a) What would be the consequences of deficiency of hemoglobin in our body?
15. Name the following with reference to the alimentary canal.
 a) The largest gland
 b) The gland that secretes digestive enzymes and hormones.
 c) The part where digestive food is absorbed.

5- Marks Questions

Level-1

1. a) Draw a diagram of human digestive system and label the following parts:
 i) that secretes Bile juice - **liver**
 ii) that secretes Insulin - **Pancreas**
 iii) the site of complete digestion of food - **small intestine**
 iv) HCl acid is release here - **stomach**
 b) **What is peristaltic movement?**
- 2) a) Name the hormone which is released into the blood when its sugar level rises.
 Name the organ which produces this hormone and its effect on blood sugar level. Also
 mention the digestive enzymes secreted by this organ with one function of each.

b) Explain the need of chemical communication in Multicellular organisms.

- 3) a) Why are valves needed in the heart?
 b) What is blood pressure? Name the instrument that use to measure blood pressure.
 c) Leakage of blood from the blood reduces the efficacy of the pumping system. How is this leakage prevented?
 d) How are oxygen and carbon dioxide transported in human being?

Level-2

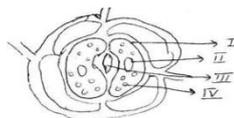
4. a) State the form in which following are stored?
 (i) Unused carbohydrates in plants
 (ii) The energy derived from food in humans
 b) Describe the process of nutrition in Amoeba with the help of diagram.
 c) How does paramecium obtain its food?
 5. a) Draw the human respiratory system and label the following, bronchi and alveolar sac.
 b) During breathing cycle, what is the advantage of residual volume of air in lungs?
 6. a) What is double circulation in human being? Why it is necessary?
 b) Why are the valves present in the veins?
 c) How many chambers are present in the heart of (i) Fish (ii) Frog

Level-3

7. During respiration of an organism 'A' one molecule of glucose produces two ATP molecules where in respiration of another organism 'B', one molecule of glucose produces 38 ATP molecules.

- a) Which organism is undergoing aerobic respiration?
 b) Which organism is undergoing anaerobic respiration?
 c) Which type of organisms 'A' or 'B' convert glucose into alcohol?
 d) Name one organism which behaves like 'A'.
 e) Name one organism which behaves like 'B'.
 a) Organism 'B' b) Organism 'A' c) Organism 'A' d) Yeast e) Human being

9. a) Leaves of a healthy potted plant were coated with vaseline to block the stomata. Will this plant remain healthy for long? State three reasons for your answer.
 b) (i) In the following diagram of stomatal apparatus, label parts shown by Roman numerals II and III



- ii) What is the function of guard cell?
- 10.a) Draw a neat diagram of human excretory system and label the following parts:
- Aorta, vena cava, Ureter and urinary bladder.
- c) Name the structural and functional unit of Kidney? Write its function.

DIAGRAMS

DRAW a well labelled diagram of

- 1) Human Digestive system 2) Human respiratory system 3) Human Heart
4) Human Excretory System 5) Nephron

(2) CHEMICAL REACTIONS (40 Marks)

1. Oil and Fat containing food items flushed with nitrogen. Why? (1)
2. Write the balanced chemical equation for the following reactions:
 - a) Silver bromide on exposure to sunlight decomposes into silver and bromine.
 - b) Sodium metal reacts with water to form sodium hydroxide and hydrogen gas (2)
3. What happens when quick lime is added to water? Write the Equation also. (2)
4. Why should a magnesium ribbon be cleaned before burning in air? (2)
5. a) What are redox reactions? (3)
 - b) Why the reaction of Zinc oxide and carbon is called a redox reaction?
 - c) Identify the substance oxidized and the substance reduced in the above reaction.
6. What is neutralisation reaction? Give two examples. (3)
7. a) What is decomposition reaction? Give one example. (3)
 - b) What type of reaction occurs when silver Bromide exposed to sunlight?
 - c) Identify the type of reaction when Lead nitrate solution mixed with potassium iodide solution.
8. Write one equation each for decomposition reactions where energy is supplied in the form of heat, light and electricity. (3)
9. Explain the following terms with one example each; (3)
 - a) Corrosion
 - b) Displacement reaction

10. a) Write the chemical name and formula of Bleaching powder.
(3)
- b) Write chemical equation for the preparation of bleaching powder from slaked lime.
- c) Write two uses of Bleaching powder.
11. A blue colored salt becomes white on heating. Give reason for the above observations. What happens when we add water to the salt which is obtained after heating? Also write its chemical formula.
(3)
12. What happens when silver chloride is exposed to sunlight? Write the chemical equation for this reaction. Also write one use of such reaction.
(3)
- 13.i) Define corrosion. (5)
- ii) What is corrosion of Iron called?
- iii) How will you recognize the corrosion of silver?
- iv) Why corrosion of Iron is a serious problem?
- v) How can we prevent corrosion of Iron?
- PBQ
14. On keeping iron nails in blue coloured Copper Sulphate solution, it is observed that the colour of the solution turns light green after sometime. Give reason for this colour change. Name the type of the reaction.
(2)
15. You have to perform displacement reaction in the school laboratory to show zinc is more reactive than copper, name the aqueous solution required for this experiment. State the change in colour and give the chemical reaction involved.
(2)