

**INTERNATIONAL INDIAN SCHOOL, DAMMAM**

**REVISION WORKSHEET FOR TERM-I (2017-18)**

**SUBJECT: PHYSICS**

**CLASS: X**

**TOPIC: MAGNETIC EFFECTS OF ELECTRIC CURRENT**

1. What is meant by the term magnetic field?
2. Why does a compass needle show deflection when brought near a bar magnet?
3. Draw a sketch of the pattern of field lines due to a
  - i) Current carrying circular coil
  - ii) Solenoid carrying current
4. Under what condition is the force experienced by a current carrying conductor placed in a magnetic field
  - i) maximum
  - ii) minimum.
5.
  - a) What does the degree of closeness of field lines signify?
  - b) Why two magnetic lines of force never intersect each other?
6. State the rule to determine the direction of a
  - i) force experienced by a current carrying straight conductor placed in a magnetic field which is perpendicular to it.
  - ii) magnetic field produced around a straight conductor carrying current.
7. Describe an activity to demonstrate the pattern of magnetic field lines around a straight conductor carrying current.
8. A compass needle is placed near a current carrying wire. State your observation for the following cases and give reason for the same in each case-
  - a) Magnitude of electric current in the wire increased.
  - b) The compass needle is displaced away from the wire.
9.
  - a) Mention the factors on which the direction of force experienced by a current carrying conductor placed in a magnetic field depend.
  - b) A proton beam is moving along the direction of magnetic field. What force is acting on proton beam?
10. What is the shape of a current carrying conductor whose magnetic field pattern resembles that of a bar- magnet?
11. Draw a neat diagram to show the magnetic field line around a bar magnet. List two properties of magnetic field lines.

12. a) What is an electromagnet?  
b) List any two uses.  
c) Draw a labelled diagram to show how an electromagnet is made.  
d) What is the purpose of the soft iron core used in making an electromagnet?
13. Consider a circular loop of wire lying in the plane of the table. Let the current pass through the loop clockwise. Apply the right hand rule to find out the direction of magnetic field inside and outside the loop.
14. How will the magnetic field produced at a point due to a current carrying circular coil changes if we:
  - i) increase the current flowing through the coil?
  - ii) reverse direction of current through the coil?
  - iii) increase the number of turns in the coil?
  - iv) increase in radius of coil?

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# REVISION WORKSHEET 2017- 18

## CLASS X

### TOPIC : ELECTRICITY

- 1) Why is series arrangement not used for connecting domestic electrical appliances in a circuit?
- 2) An electric fan/ motor becomes warm when continuously used for a long time why?
- 3) Two bulbs 60W,220V and 40W,220V are connected in series. Which of the bulb will glow brighter?
- 4) List in a tabular form two differences between voltmeter and an ammeter
- 5) State Joules law of heating and give its mathematical form
- 6) An electric iron takes a current of 5A and develops  $1.5 \times 10^4$  J of heat energy in 30s. Calculate the resistance of the electric iron
- 7) What does an electric circuit mean? Distinguish between open and a closed circuit.
- 8) If two wires P and Q have length and cross section area ( $l, A$ ) and ( $l, A/2$ ) respectively . Which one has greater resistance? Justify
- 9) Draw a diagram of an electric circuit comprising of 3 cells and an electric bulb , ammeter , plug key in ON mode and another with two bulbs in parallel and a voltmeter across the combination
- 10) An electric geyser rated 1500W,250V it is connected to a 250V line mains.Calculate
  - a) The electric current drawn by it
  - b) Energy consumed by it in 50 hours
  - c) Cost of energy consumed if each costs Rs.6.00
- 11) Compare the power used in 2ohm resistor in each of the following circuits
  - a) 6V battery in series with  $1\Omega$  and  $2\Omega$  resistors
  - b) a 4v battery in parallel with  $12\Omega$  and  $2\Omega$  resistors
- 12)How does the resistance of an ohmic conductor depend on the applied voltage?

13 Explain with the help of diagram derive the expression for the resistor connected in series and the resistor connected in parallel.

14) Two heaters rated 750W, 200V and 1000W, 200V are connected in parallel across 200V supply. Calculate the total power consumed?

15) Resistance of a metal wire of length 25cm is  $6.5 \Omega$ . If the diameter of the wire is 0.3mm, calculate the resistivity of the metallic wire.

16) State Ohms law . How is it represented graphically

INTERNATIONAL INDIAN SCHOOL DAMMAM

WORK SHEET

CLASS:X :: CHEMISTRY

L-1 CHEMICAL REACTIONS AND EQUATIONS

1. On what basis is a chemical equation balanced?
2. What happens chemically when quick lime is added to water filled in a bucket?
3. Why is photosynthesis considered an endothermic reaction?
4. Translate the following statements into chemical equations and balance them:
  - a) Phosphorus burns in Oxygen to give phosphorus penta oxide.
  - b) Carbondisulphide burns in air to give carbon dioxide and Sulphur dioxide.
  - c) Aluminum metal replaces iron from ferric oxide giving aluminum oxide and iron.
  - d) Barium chloride reacts with zinc sulphate to give zinc chloride and barium sulphate.
  - e) Aluminum sulphate + sodium hydroxide gives aluminum hydroxide + sodium sulphate.
5. Define the following:
  - a) Combination reaction
  - b) Decomposition reaction
  - c) Displacement reaction
  - d) Double displacement reaction ‘
  - e) Redox reaction with an example
6. A metal nitrate gives yellow colored metal oxide along with brown gas B and a colorless gas C. Aqueous solution of A on reaction with potassium iodide forms a yellow precipitate of compound D. Identify A, B,C,D. Identify the types of reactions.
7. In the reaction represented by the equation  $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$ . Name the substance oxidized the substance reduced, oxidizing agent and reducing agent.
8. What type of reaction takes place when:
  - a) Magnesium wire is burnt in air.
  - b) Lime stone is heated.
  - c) Silver bromide is exposed to sunlight.
  - d) Ammonia and hydrogen chloride are mixed to give ammonium chloride.
9. Explain the term rancidity. What damage is caused by rancidity? What type of chemical reaction is responsible for causing rancidity? State and explain the various methods used for preventing rancidity of food.

## WORKSHEET FOR ACIDS, BASES AND SALTS

1. Define olfactory indicators? What is the effect of vanilla essence when it is dissolved in acids and bases?
2. Which bases are called alkalis. Give one example.
3. What is neutralization reaction. Give one example.
4. Curd is not kept in copper and brass utensils. Why?
5. During summer season a milk man usually adds a very small amount of baking soda to fresh milk. Give reason.
6. Name the gas usually liberated when a dilute acid reacts with a metal. What happens when a burning candle is brought near this gas?
7. How does a flow of acid rain water into river makes the survival of aquatic life in the river difficult?
8. Arrange the following in an increasing order of their PH values. NaOH solution, blood, lemon juice.
9. Name the gas evolved in dilute sulphuric acid acts on sodium carbonate.
10. What are antacids. Give one example.
11. What is the cure of bee sting?
12. Do alkalis also react with metals. Give one example.
13. Which acid and base are used in the formation of the following salts:  
(a) Copper Sulphate 2. Sodium Nitrate
14. What is the colour of methyl orange in baking soda?
15. Dry ammonia gas has no action on litmus paper, but a solution of ammonia in water turns red litmus paper blue. Why it is so?
16. What effect does the concentration of  $H^+(aq)$  have on the acidic nature of the solution?
17. Do basic solutions also have  $H^+(aq)$  ions? If yes why they are basic?
18. What is the common name of the compound  $CaOCl_2$
19. State the chemical name of plaster of paris. Write a chemical equation to show the reaction between plaster of paris and water .
20. Classify the following salts into acidic, basic and neutral?  
Potassium sulphate, Ammonium Chloride, Sodium Carbonate, Sodium Chloride.
21. What is chlor-alkali process?
22. What happens when sodium bicarbonate is heated?
23. How washing soda is prepared?
24. How washing soda is prepared? Give the chemical reaction.
25. What is water of crystallisation? Give one example.
26. A compound which is prepared from gypsum has the property of hardening when mixed with proper quantity of water
  - a. Identify the compound.
  - b. Write the chemical equation for its preparation
  - c. Mention one important use of this compound.
27. Name the compound whose one formula unit is associated with ten water molecules. How is it prepared. Give the equations of related reactions. Give uses of the compound.

28. In one of the industrial process used for manufacture of sodium hydroxide, a gas X is formed as bye product. The gas X reacts with lime water to give a compound Y which is used as a bleaching agent in chemical industry. Identify X and Y giving the chemical equation of the reaction involved. .
29. How would you distinguish between baking powder and washing soda by heating?

101 term worksheets for class 10

## WORK SHEET - BIOLOGY CLASS 10

### NUTRITION & RESPIRATION

#### 1 mark questions:

1. What are the final products formed after digestion of carbohydrates and proteins?
2. What is saliva? State its role in the digestion of food?
3. What is the mode of nutrition in human beings?
4. Why do aquatic organisms breathe faster than the terrestrial animals?
5. What is the role of acid in our stomach?
6. Name the final and intermediate products formed during aerobic respiration.
7. Name the two ways by which glucose is oxidized to provide energy in various organisms.
8. Which pancreatic enzyme is effective in digesting proteins?
9. Name the tissue which transports soluble products of photosynthesis in a plant?
10. Why is anaerobic respiration less efficient?
11. Name the fundamental process by which living organisms release energy within their cytoplasm?
12. What is adam's apple?
13. Which enzyme present in saliva breaks down starch?
14. Name one gland in human body that secretes hormones and digestive enzymes?
15. Name the process in plants where water is lost as water vapour?

#### 3 mark questions:

1. Explain the process of nutrition in amoeba?
2. How are alveoli designed to maximize the exchange of gases? What is the function of epiglottis in man?
3. Explain the process of photosynthesis.
4. Draw a neat labeled diagram of the structure of chloroplast?
5. Draw a schematic diagram to show the opening and closing of stomata. Give two functions of stomata.
6. What are the components of gastric juice? Mention the roles of each.
7. How is the small intestine designed to absorb digested food?
8. In human alimentary canal, name the site of complete digestion of various components of food. Explain the process of digestion happening here.
9. Name the process by which autotrophs prepare their own food. List three events that occur during this process. State two sources from which plants obtain nitrogen for the synthesis of proteins.



10. Draw a neat labelled diagram of the respiratory system of humans. List four conditions required for efficient gas exchange in an organism.
11. Explain the process of digestion of food in mouth, stomach and small intestine in human body.
12. Plants have low energy needs as compared to animals. Explain.
13. Why do we get cramps during vigorous muscular activity? Explain the aerobic break down of glucose with the help of a schematic diagram.
14. Why is the small intestine in herbivores longer than in carnivores? Why does absorption of food occur mainly in the small intestine?
15. What is the significance of emulsification of fats? What is bile? Where is it produced?
16. Structure of leaf is complementary to its function. Explain.
17. What is the path of translocation in plants? Name the water and mineral conducting element of plants. How does conduction take place through it?
18. Name two animals having cutaneous respiration. How is inspiration and expiration brought about in human beings?
19. Describe an experiment to show that "sunlight is essential for photosynthesis"?
20. How is transportation of water in xylem tissue different from translocation of food in phloem tissue?

### 5 Mark questions:

1. Draw a neat labelled diagram depicting the structure of Human alimentary canal.  
State the roles of liver and pancreas.
2. Name the organs which performs the following functions:
  - a. Absorption of digested food
  - b. Absorption of water
3. Explain the process of breakdown of glucose in a cell
  - i) in the presence of oxygen
  - ii) in the absence of oxygen
4. Draw a diagram to show nutrition in amoeba and label the parts.
5. Name the glands associated with digestion of starch in human digestive tract and mention their role.
6. How is the required PH maintained in the stomach and small intestine?
7. Explain the process of digestion of food in mouth, stomach, and small intestine in human body.
8. How is respiration different from breathing? Explain the processes of aerobic and anaerobic respiration.

## Transportation and Excretion

1. Name the materials transported by plasma.
2. Name the network of tubes which reaches all the tissues.
3. Explain the structure of human heart with the help of a diagram.
4. Explain the functioning of human heart.
5. What is double circulation? Why it is called so?
6. How do birds and mammals maintain their body temperature?
7. Differentiate between arteries and veins.
8. Compare the structure and function of arteries and veins.
9. What are platelets? Write their functions.
10. What is lymph? Write a brief description on its composition and function.
11. Explain the theories which explain water transport in plants.
12. Give reason - why plants have low energy needs?
13. What is translocation? Explain the process of translocation in plants.
14. What is transpiration? Why is it necessary?
15. What are the components of the transport system in highly organized plants?
16. Explain the terms a) root pressure b) transpiration c) translocation
17. Why are the walls of the ventricles thicker than that of auricles?
18. What is the significance of valves in the veins?
19. What is blood? List the components of blood and one function of each of them.
20. Define systemic circulation and pulmonary circulation.
21. List any 4 functions of blood.
22. Why is lymphatic system required in our body?
23. Name the membrane that insulates the heart.
24. Why is there a necessity to completely separate pure and impure blood in aves and mammals?
25. Why is mixing up of oxygenated and deoxygenated blood tolerated in amphibians and reptiles?
26. How is blood vascular system different from lymphatic system?
27. What is excretion?
28. Name the main and accessory excreting organs in human beings.
29. Explain the structure of human excretory system with the help of diagram. Also mention its location.
30. What is the function of urinary bladder?
31. Name the functional unit of excretory system. Explain its structure and function.
32. Draw a neat labeled diagram of a nephron.
33. Briefly explain the formation of urine in the nephron.
34. Name the connections between kidneys and urinary bladder.
35. What is artificial kidney? Write a brief description on its functioning.
36. What is the difference between filtration of blood in nephron and dialysis?
37. What is glomerulus?
38. What is re-absorption? In which part of the excretory system it takes place?
39. How is urine produced? What is the purpose of producing urine?
40. What are the different methods used by plants to get rid of excretory products?

41. How is the amount of urine produced in the body regulated?
42. What does the dialyzing solution contains?
43. How are the waste products excreted in amoeba?
44. State two vital functions of kidneys in man.
45. In which part of the nephron does the re-absorption of nutrients takes place?

## CONTROL AND COORDINATION

1. Name the basic unit of nervous system
2. What is the difference between a reflex action and walking?
3. What happens at the synapse between two neurons?
4. Why is the use of iodized salt advisable?
5. What are the functions of thyroxin hormone in our body?
6. Name the main thinking part of brain
7. Name one hormone found in human male
8. Name the part which control blood pressure, salivation and vomiting
9. What do you understand by the term reflex arc?
10. Drastic changes of body features associated with puberty are mainly because of secretion of which hormone?
  - i) Estrogen from testes and testosterone from ovary
  - ii) Estrogen from adrenal gland and testosterone from pituitary gland
  - iii) Testosterone from testes and estrogen from ovary
  - iv) Testosterone from thyroid gland and estrogen from pituitary gland.
11. Which part of the brain maintains posture and equilibrium of the body?
12. How do we detect the smell of an agarbatti (incense stick)?
13. What is the role of the brain in reflex action?
14. How is the movement of leaves of the sensitive plant different from the movement of a shoot towards light?
15. How does our body respond when adrenaline is secreted into the blood?
16. What are the type of receptors that detect smell and taste in our body?
17. How does chemical coordination take place in animals?
18. What are the parts included under hind brain?
19. Why does the stem of a plant bend in the direction of light? What causes this movement?
20. Draw a neat sketch to locate all endocrine and exocrine glands in the human body
21. List the functions of hypothalamus, pituitary gland and cerebrum

## SOURCES OF ENERGY

1. What is the nuclear fission process?
2. Name any two gases, which are major constituents of biogas.
3. What is a solar cell panel?
4. Give the names of any two devices that utilize solar energy.
5. Outline the energy conversion that takes place in a hydro power plant.
6. Why can CNG be considered as an environment friendly fuel?
7. What is anaerobic degradation?
8. Define bio-mass. Give two examples.
9. What are the limitations of using wind energy?
10. What is acid rain? What are its harmful effects?
11. What characteristics should an ideal fuel possess?
12. Give the advantages and disadvantages of solar cell panels.
13. What is the condition under which ocean thermal energy can be trapped and used?
14. What is the cause of geothermal energy?
15. What is a good source of energy?
16. What is a good fuel?
17. If you could use any source of energy for heating your food, which one would you use and why?
18. What are the disadvantages of fossil fuels?
19. Why are we looking at alternate sources of energy?
20. Name two gases, other than carbon-dioxide that are given out during burning of fossil fuels and contribute towards acid rain formation?
21. How has the traditional use of wind and water energy been modified for our convenience?
22. Why are many thermal power plants set up near coal or oil fields?
23. On what basis would you classify energy sources as
  - (a) Renewable and non-renewable?
  - (b) Exhaustible and inexhaustible?
24. Why is solar cooker box covered with a plane glass plate?
25. Why is the energy of water flowing in a river considered to be an indirect form of solar energy?
26. Write one advantage of nuclear fission reaction.
  - (a) State one limitation of solar energy available from solar cells.
  - (b) What is the minimum wind velocity required to obtain useful energy from a wind mill?
  - (c) Define the term 'nuclear fission'.

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# INTERNATIONAL INDIAN SCHOOL DAMMAM

## CLASS X BIOLOGY WORKSHEET 2015-16

### TRANSPORTATION AND EXCRETION

- 1) Name the two kinds of cell in xylem.
- 2) What are the components of the transport system in highly organized plants?
- 3) What gaseous waste products are excreted by plants?
- 4) Out of xylem and phloem, which one carries materials, only upwards?
- 5) Name the conducting tissue which is made up of sieve tubes and companion cells?
- 6) What is transpiration?
- 7) What is translocation? Which plant tissue is involved in translocation?
- 8) Name the tissue which carries the substances upwards as well as downwards?
- 9) What are the differences between the transport of materials in xylem and phloem?
- 10) Name the pigment in plant that can absorb solar energy.
- 11) Name the organs of circulatory system in humans.
- 12) Which organ acts as a pump in the circulatory system?
- 13) Where does the blood absorb oxygen?
- 14) What stops blood from flowing backwards through heart?
- 15) What is blood? What are the components of blood? Write the functions of each.
- 16) What are the advantages of blood capillaries?
- 17) What are the advantages of having a very thin and highly branched capillaries for blood flow?
- 18) What is the meaning of double circulation?
- 19) What is the natural device that prevents bleeding?
- 20) What is dialysis? How is it useful?
- 21) What is excretion? How is solid and gaseous material excreted from the human body?
- 22) How does water rise in tall trees?
- 23) How is prepared food transported to all parts of the plant?

#### CORRECT THE FALSE STATEMENT:

- a. The walls of atrium are thicker than the walls of the ventricles.
- b. Xylem transports food materials.
- c. The blood circulation type in humans is that of open type.
- d. Nephrons are located in the lungs.

- 24) Name the blood vessel that brings nitrogenous waste to the kidneys.
- 25) Which part of nephron is connected to the ureters?
- 26) Name the largest artery in our body.
- 27) What is ascent of sap? What are the factors that influence the ascent of sap?
- 28) What are the functions of circulatory system?
- 29) Why there is no mixing of oxygenated and deoxygenated blood in human heart?
- 30) Draw and label..(i) Schematic diagram of double circulation in humans (ii) structure of nephron.

## INTERNATIONAL INDIAN SCHOOL, DAMMAM

### Worksheet – Biology – Class X

#### Control and Coordination

1. What is a neuron?
2. What is human nervous tissue made of?
3. What is a synapse? In what form does the impulse travel across a synapse?
4. What is a neuro muscular junction?
5. What is a reflex action? What is the role of the brain in reflex action?
6. What is peripheral nervous system made of? What is its function?
7. How is the brain protected from shock and injury?
8. What are the parts of hind brain? Write the functions of each.
9. Where is the centre for hunger located?
10. What are the 2 major types of movements shown by plants?
11. What are tropic movements?
12. What are plant hormones? Name them and write the functions of each.
13. Name the plant hormone that promotes cell division. Where is its present in greater concentration in plants?
14. Write the function of hormone "thyroxin" in our body?
15. What is the cause for the disorder "dwarfism"?
16. Which hormone is responsible for the development of moustache and beard in men?
17. How are involuntary actions and reflex actions different from each other?
18. Give 2 reasons why chemical communication is necessary along with nervous-coordination in animals?
19. Why are some patients of "diabetes" treated by giving injections of insulin?
20. Draw a neat labeled diagram of a neuron and explain how it conducts nerve impulses?
21. Define nerve impulse. Which structure in a neuron helps to conduct a nerve impulse (a) towards the cell body; (b) away from the cell body?
22. What is a reflex arc? Why have reflex arcs evolved in animals?
23. Draw a diagram of human brain and label on it, the following parts (a) Cerebrum; (b) Meninges; (c) Medulla; (d) Cerebellum.
24. What is the difference between sensory and motor neurons? Which parts of human brain are responsible for auditory reception and sensation of smell?
25. How do muscle cells move?
26. What is geotropism. Give an example of its 2 types.
27. Draw a diagram showing endocrine glands in a male body.
28. How does our body respond when adrenaline is secreted into the body?
29. Write the name and function of the hormones secreted by  
(i) Thyroid (ii) Pancreas (iii) Pituitary
30. Name the main thinking part of the brain. Describe the various regions present in it.
31. Describe how drooping movement of leaves is brought about in sensitive plant.
32. Describe an experiment to demonstrate phototropism.

**INTERNATIONAL INDIAN SCHOOL –DAMMAM (2015 – 2016)**

**BIOLOGY WORK SHEET --- X STANDARD**

1. Define saprophytic, parasitic and holozoic nutrition, giving one examples for each.
2. How does carbon dioxide enter the leaves of a plant to be used in photosynthesis.
3. What is heterotrophic nutrition. Give one example to explain.
4. Explain the mechanism of photosynthesis.
5. How does the water from the soil reach the leaves of a plant, for photosynthesis?
6. How do guard cells regulate opening and closing of stomatal pores?.
7. If a plant is releasing carbon dioxide and taking oxygen during day, does it mean that there is no photosynthesis occurring. Justify your answer.
8. What will happen to the rate of photosynthesis under the following circumstances
  - a). Cloudy day in the morning but bright sunshine in the afternoon
  - b). No rainfall in the area for a considerable time.
  - c). Gathering of dust on the leaves.
9.
  - a). Describe the parts of our tooth with the help of a labeled diagram
  - b). What is meant by dental caries? How are they caused?
  - c). What is dental plaque?. What harm can it do? How can its formation be prevented?
10. With a labelled diagram of the human digestive system describe the process of digestion
11. Which part of the body secretes bile? What is the function of bile in digestion?
12. What on the role of ptyalin in the digestion process with an equation.
13. The partially digested food coming from the stomach enters a long narrow organ A in his body. The organ A receives the secretions of two glands: liver and pancreas. Liver secretes a greenish yellow liquid B which is normally stored in organ C. Pancreas secretes pancreatic juice which contains three digestive enzymes D,E,F. on completion of digestion of food, it is absorbed by G into the blood stream. The undigested food passes into a wider tube H which absorbs water. The last part of H called I stores the undigested food. This is then passed out through J as feces in the process known as K .
  - a) Name the organ A.
  - b) Name liquid B and C
  - c) What are the digestive enzymes D,E,F.
  - d) Write about G
  - e) Name tube H, part I, Opening J and process K
14. Which of the following is the correct statement
  - a) Heterotrophs synthesise their own food
  - b) Heterotrophs utilize solar energy for photosynthesis
  - c) Heterotrophs do not synthesise their own food

15. Which of the following is incorrect statement?

- a) Energy is essential for life process
- b) organisms grow with time
- c) Movement of molecules does not take place among cells.
- d) organisms must repair and maintain their body.

#### RESPIRATION

1. Describe structure of the human respiratory system with a neat labeled diagram.
2. How are lungs designed to increase the area of absorption of respiratory gases?
3. Why do we say inhalation of CO is dangerous?
4. Explain why is it advisable not to have low levels of HB in our blood?
5. What are alveoli?
6. How do alveoli function?
7. What is pleura? What is it meant for?
8. Why does not the trachea collapse even if there is no air in it?
9. How does a ventilator function?
10. Explain the process of inhalation and exhalation.