

HOLIDAY ASSIGNMENT

CLASS-X

ASSIGNMENT-1

Physics

1. Name the unit of (a) electrical resistance (b) resistivity. [1]
2. What is electrical power? Write its unit. [2]
3. An electric bulb is rated as 60 W – 220 V. What is its resistance and safe limit of current through it. [2]
4. A wire is 1m long, 0.2mm in diameter and has resistance of 10Ω . Calculate its resistivity. [3]
5. A piece of wire having a resistance R is cut into five equal parts [5]
 - i) How will the resistance of each part of the wire compare with the original resistance?
 - ii) If the five parts of the wire are placed in parallel, how will the resistance of the combination compare with the resistance of the original wire? What will be ratio of resistance in series to that of parallel?

Chemistry

1. Why do we store AgCl in dark coloured bottle? 1
2. Account for the following: $2 \times 2 = 4$
 - a) A reddish brown coating is formed over iron material when exposed to moist air.
 - b) A yellow precipitate is obtained when KI solution is added to $\text{Pb}(\text{NO}_3)_2$ solution.
3. What is rancidity? Mention two ways by which rancidity can be prevented. 3
4. a) What is corrosion? $1+2+2=5$
 - b) Write two factors which enhance corrosion.
 - c) Write the name and the formula of the compounds formed when silver and copper get corroded.

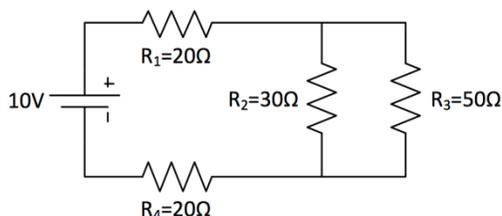
Biology

1. Write the raw materials for photosynthesis. 1
2. Write the function of bile juice in digestion. 1
3. Write the function of HCl in digestion. 2
4. Briefly describe the function of pancreatic juice in digestion. 2
5. Write the mechanism of opening and closing of stomata along with simple diagram. 3
6. Draw the diagram of Human digestive system and label the following parts: Oesophagus, Pharynx, Small intestine, Liver. 5

ASSIGNMENT-II

Physics

1. What is the commercial unit of electric energy? Write its relation with the S.I unit of energy. [1]
2. a) State Ohm's law and its mathematical form [2]
b) What does the slope of V-I graph of Ohm's law represent?
3. a) Write the S.I unit of resistivity. [2]
b) Resistivity of silver is 1.60×10^{-8} ohm-m. What is meant by this statement?
4. A wire of length L and of uniform cross-section A has resistance 10 ohm. If by keeping the volume constant it is stretched to twice of its previous length, then what will be resistance of the stretched wire? [3]
- 5.



[5]

From the figure ,

- a) Find the equivalent resistance across the cell.
- b) The total current drawn from the cell.
- c) Potential drop across the 50 ohm resistance.
- d) Current through the 30 ohm resistance.

Chemistry

1. On what basis is chemical equation balanced? 1
2. Why do substances undergo change in physical state? 2
3. Solids are generally very heavy while gasses are light. Explain. 2
4. Identify the oxidant in the following reactions 3
 - a) $\text{CuSO}_4(\text{aq}) + \text{Zn}(\text{s}) \rightarrow \text{Cu}(\text{s}) + \text{ZnSO}_4(\text{aq})$.
 - b) $\text{V}_2\text{O}_5 + \text{Ca} \rightarrow \text{V} + \text{CaO}$.
 - c) $\text{Fe}(\text{s}) + \text{H}_2\text{O}(\text{V}) \rightarrow \text{Fe}_3\text{O}_4(\text{s}) + \text{H}_2$

5. Give an example of the following reactions. 5
- a) Photochemical decomposition.
 - b) Simple displacement.
 - c) Redox.
 - D)Double displacement.
 - e) Thermal decomposition

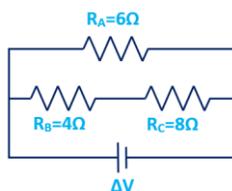
Biology

1. Mention the name of the enzyme which is present in salivary juice. 1
2. Name the type of nutrition performed by amoeba. 1
3. Write any two differences between aerobic and anaerobic respiration. 2
4. Define Glycolysis. How many ATPs are produced during glycolysis? 2
5. Briefly describe the nutrition in amoeba along with a suitable diagram. 3
6. Briefly describe the mechanism of breathing along with the suitable diagrams of inhalation and exhalation. 5

ASSIGNMENT-III

Physics

1. Why is nichrome used as a heating element in electric heater? [1]
2. What is the difference between open and closed circuits? Draw diagrams for both. [2]
3. You take two resistors of resistance $2R$ and $3R$ and connect them in parallel in an electric circuit. Calculate the ratio of the electrical power consumed by $2R$ and $3R$? [2]
4. A torch bulb is rated at $3V$ and $600mA$. Calculate it's
(a) Power b) Resistance c) Energy consumed if it is lighted for 4 Hrs. [3]
5. [5]



- a) Find the equivalent resistance of the circuit.
- b) If the current drawn from the cell is $3A$, then find the value of V .
- c) What is the potential drop across the 4Ω resistor?

Chemistry

1. What happens chemically, when quick lime is added to water filled in a bucket? 1
2. Why should we store butter in refrigerator? 2
3. How does goldsmith clean the silver ornaments. Write the chemical reaction involved. 2
4. Which among the following changes are exothermic and endothermic in nature? 3
 - i) Respiration
 - ii) Photosynthesis
 - iii) Dilution of acid.
5. Balanced the following chemical equations: 5
 - a) $Al + CuCl_2 \rightarrow Cu + AlCl_3$
 - b) $Cu + HNO_3 \rightarrow Cu(NO_3)_2 + NO + H_2O$
 - c) $C_2H_6 + O_2 \rightarrow CO_2 + H_2O$
 - d) $N_2 + H_2 \rightarrow NH_3$
 - e) $FeS_2 + O_2 \rightarrow Fe_2O_3 + SO_2$.

Biology

1. Write the function of Large intestine. 1
2. Define fermentation. 1
3. Mention the four different components of xylem tissue. 2
4. Write the functions of xylem and phloem. 2
5. Write the function of salivary and gastric juice in digestion. 3
6. a) What do you mean by emulsification of fat?
b) Briefly describe the protein digestion process in stomach and small intestine.
c) Mention the different components of a phloem tissue. 5

Project: Prepare the practical file.