

DELHI PUBLIC SCHOOL, JAMMU
SESSION (2019-20)
Assignment Half-yearly Examination (September)
(Science)

Subject: Physics

Class: 10th

Chapter Covered:

1. Light (Reflection and Refraction)

2. Human eye & colourful world

3. Sources of energy

1. Driver's mirror forms _____ image;

(a) Virtual (b) both real and virtual (c) real (d) none of these

2. The colour of light which travels faster through prism is;

(a) Yellow (b) Green (c) Violet (d) Red

3. Define Power of the lens.

4. What is the function of pupil?

5. The wind velocity required for wind mill to produce electricity is _____ km/h

6. **Assertion:** Solar cooker converts solar energy into heat energy.

Reason: It is by trapping IR radiations.

(a) A (b) B (c) C (d) D

7. What do you mean by energy crises? Give its cause and preventive measures.

8. (a) How scattering of light takes place? Explain. Also state the factors on which colour of scattered light depends..

9. Draw the image formed by concave mirror when (I) Objects lie beyond C (II) Object lies between F and P.

Or

(a) State Snell's law of refraction. (b) The refractive index of diamond is 2.42 times. What is the meaning of this statement?

10. (a) Define refraction and state its laws. (b) Give difference between real and virtual image.

11. (a) The far point of eye is 80cm. What is the nature and the power of the lens required? Also give the defect of vision.

(b) Why stars appear to twinkle but planets do not?

Or

(a) How does the retina send images to the brain in producing a sense of vision?

(b) Give the functions of (a) Cornea (b) Pupil and (c) Ciliary muscles of eye.

Subject: Chemistry

Chapters covered:

1. Chemical reactions and equations,

2. Acids, bases and salts,

3. Metals and non-metals.

Q1. What pH value do you expect for CuSO₄?

- (a) pH=7 (c) pH> 7
(b) pH<7 (d) pH=14

Q2. Which gas is evolved when zinc metal reacts with NaOH?

- (a) Hydrogen (c) Oxygen
(b) Nitrogen (d) Carbon dioxide.

Q3. What is redox reaction? Give an example.

Q4. What is a balanced chemical equation? Give an example.

Q5. The process of coating iron and steel objects with a thin layer of zinc is called.....

Q6. Assertion: Sodium and potassium are stored in kerosene oil.

Reasoning:- They are less reactive towards air or water.

A) Both Assertion and Reasoning are true and Reasoning is the correct

Explanation of Assertion.

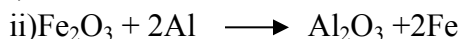
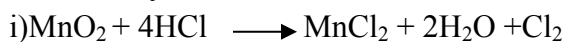
B) Both Assertion and Reasoning are true but Reasoning is not the correct

Explanation of Assertion.

C) Assertion is true but Reasoning is false.

D) Assertion is false but Reasoning is true.

Q7. Identify the substances that are oxidized and the substances that are reduced in the following reactions.



Q8. While diluting an acid, why is it recommended that the acid should be added to water and not water to the acid?

Q9. What would you observe when Zinc is added to a solution of iron(II)sulphate? Write the chemical reaction that takes place.

OR

What are amphoteric oxides? Give two examples of amphoteric oxides.

Q10. (a) What chemical process is used for obtaining a metal from its oxide?

(b) State three ways to prevent the Rusting of Iron.

(c) Write the properties of Ionic compounds.

Q11. (a) Why does dry HCl gas not change the colour of the dry litmus paper?

(b) Name the sodium compound which is used for softening hard water.

(c) What will happen if a solution of sodium hydrogen carbonate is heated? Give the equation of the reaction involved.

OR

State in brief the method of preparation of baking powder. Write a balanced chemical equation for the reaction involved and state the uses of baking powder.

Subject: Biology

Chapters covered:

1. Life processes.

2. Control and coordination.

Q1. What is the mode of nutrition in fungi?

- (a) Autotrophic (c) Saprophytic
(b) Heterotrophic (d) Parasitic.

Q2. From which structure, the free oxygen gas produced during photosynthesis is released?

- (a) Epidermis (c) Stomata
(b) Cortex (d) Guard cell.

Q3. Assertion:- Liver is known as the smallest gland of the body.

Reasoning:- It secretes salivary amylase.

- A) Both Assertion and Reasoning are true and Reasoning is the correct Explanation of Assertion.
B) Both Assertion and Reasoning are true but Reasoning is not the correct Explanation of Assertion.
C) Assertion is true but Reasoning is false.
D) Assertion is false but Reasoning is true.

Q4. Assertion:- Plants lack the nervous system, but they do co-ordinate.

Reasoning:- It is so because of hormones.

- A) Both Assertion and Reasoning are true and Reasoning is the correct Explanation of Assertion.
B) Both Assertion and Reasoning are true but Reasoning is not the correct Explanation of Assertion.
C) Assertion is true but Reasoning is false.
D) Assertion is false but Reasoning is true.

Q5. Which nitrogenous waste product is most soluble in water?

Q6. Name two components of central nervous system in humans.

Q7. Give some examples of involuntary actions.

Q8. Name any two types of tropic movements.

Q9. What criteria do we use to decide whether something is alive?

Q10. What happens at the synapse between two neurons?

Q11. What is the role of the brain in reflex action?

OR

How do Auxins promote the growth of a tendril around a support?

Q12. Describe the process of Urine formation in kidneys.

Q13. Describe the flow of blood through the heart of human beings.

Q14. Draw a labeled diagram of human brain and mention the functions of the following:-

- (i) Medulla oblongata.
(ii) Cerebellum.
(iii) Forebrain.

OR

How does chemical co-ordination take place in animals?