HANSRAJ PUBLIC SCHOOL
SECTOR 6, PANCHKULA
CLASS:X Periodic-1 (2022-23)
SUBJECT: SCIENCE

DATE: - 25th May,2022
MM: – 40

TIME ALLOWED: 1hr 30minutes
Roll No.:

Ronith - 29

General Instructions:

1. All questions are compulsory
2. There are four sections A, B,C and D.
3. Section A 1-5 has 5 questions each is of 1 marks
4. section B 6-13 has 8 questions each is of 2 marks
5. Section C 14-16 has 3 questions each is of 3 marks
6. Section D 17-18 has 2 questions , each of five subparts ; each subpart is of 1marks.

SECTION –A

Q1. In some organisms food is digested outside the body. What name is given to this type of nutrition? Give an example.

Q2. Why are the packets of chips filled with an inert gas?

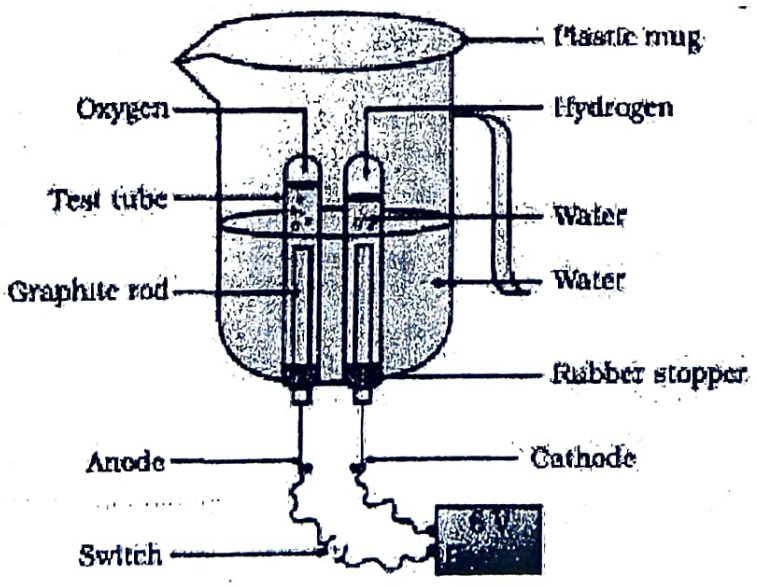
Q3. Balance the following equations:
(a) Barium chloride + potassium sulphate → barium sulphate + potassium chloride
(b) Hydrogen sulphide gas burns in air to give water and sulphur dioxide (½+½)

Q4 The radius of curvature of a spherical mirror is 20 cm. What is its focal length?

Q5. Where will the object be placed in front of a concave mirror in order to obtain the size of image same as that of the object.

SECTION-B

Q6.



(i) Which process does this diagram depict?
(Ii) Why is the gas in one test tube double than in the other test tube? (1+1)

Q7. Why is respiration an exothermic process?

Q8.. Write the main steps of the process of photosynthesis.

Q9..Explain the process of nutrition in Amoeba with the help of diagrams (mention the steps along with diagram)

Q10. What are the three pathways by which pyruvate is broken down to release energy?

Q11. A concave mirror produces a three times magnified real image of an object placed at 10 cm in front of it. Where is the image located?

Q12. Rohan, a student of class 10, wanted to obtain erect and enlarge image of an object using a mirror. Draw a suitable labelled ray diagram executing the same.

Q13. Draw a reflected ray for an incident ray parallel to the principal axis of a convex mirror. Also label the angle of incidence and reflection in the diagram.

SECTION- C

Q.14. Give reasons for the following-
a) Gastric juice contains HCl.
b) Bile is a digestive juice although it does not contain any enzymes.
c) Some air is left in the lungs after expiration.

Q15. (a) Explain the chemistry of Whitewash , with equations .
(b) Tell Oxidation , Reduction , substance oxidised , substance reduced in the following reactions :

(i) $ZnO + C \rightarrow Zn + CO$
(II) $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$ (1+2)

Q16 Which mirror is known as rear view mirror and why? Support your answer with an appropriate diagram.

SECTION - D

Q17.CASE STUDY I :

All living cells require energy for various activities. This energy is available by the breakdown of simple carbohydrates either using oxygen or without it. Answer the following questions.

i. Energy in the case of higher plants and animals is obtained by
a) Breathing
b) Tissue respiration
c) Digestion
d) Nutrition

ii. Lactic acid production has occurred in the athlete while running in the 400m race. Which of the following processes explain this event?
a) Aerobic respiration

b) Anaerobic respiration
c) Fermentation
d) Breathing

iii. The characteristic processes observed in anaerobic respiration are
i) presence of oxygen
ii) release of carbon dioxide
iii) release of energy
iv) release of lactic acid
a) i and ii only
b) i,ii and iii only
c) ii, iii and iv only
d) iv only

iv. Study the table below and select the row that has the incorrect information

	AEROBIC	**ANAEROBIC**
a) Location	Cytoplasm	Mitochondria
b) End product	CO_2 and H_2O	Ethanol and CO_2
c) Amount of ATP	High	Low
d) Oxygen	Needed	Not needed

v. Name the respiratory organ of fish.

Q18.CASE STUDY II

Precipitation reactions are those in which an insoluble substance called Precipitate is formed. They are a type of double displacement reactions , in which there is exchange of ions between the reactants to form the products .

On the basis of above information , Read the following paragraph and answer the following questions :

Two metals X and Y form salts XSO4 and Y_2SO_4 respectively .The solution of salt XSO_4 is blue in colour whereas that of Y_2SO_4 is colourless . When barium chloride solution is added to XSO_4 solution , then a white precipitate Z is formed along with a salt which turns the solution green. And when Barium chloride solution is added to Y_2SO_4 solution., then the same white precipitate Z is formed along with colourless common salt solution .

i. What could the metals X and Y be?
ii. Write the name and formula of the salt XSO_4
iii. Write the name and formula of salt Y_2SO_4
iv. What is the name and formula of white precipitate Z?
v. Write the name and formula of the salt which turns the solution green in first case .