

Q.1 A) Multiple Choice Questions

(5)

- 1) Which of the following process to be carried out to avoid the formation of greenish layer on brass vessels due to corrosion?
a. plating b. anodization c. tinning d. alloying
- 2) With the help of ray diagram we can find about the image.
a. size b. Nature c. Position d. All of the above
- 3) Which type of carbon-carbon bonds are present in Vanaspati ghee?
a. Single b. double c. triple d. single-double
- 4) If the refractive index of glass with respect of air is $\frac{3}{2}$, what is the refractive index of air with respect to glass ?
a. $\frac{2}{3}$ b. 1.5 c. 0.6' d. None of these
- 5) A DC generator is based on the principle of
a. electrochemical induction
b. electromagnetic induction
c. magnetic effect of current
d. heating effect of current

(B) Solve the following question

(5)

1) Find the odd one out.

Dispersion , Mirage, Refraction, Induction

2) Find co-related terms

Alkene : : : Alkyne : C_nH_{2n-2}

3) Match the pair.

Column "A"	Column "B"
i. IRS	a. Education
ii. EDUSAT	b. Locating place with precision
	c. Monitoring and Management of natural resources and disaster management

4) State true or false.

During dispersion red colour deviates the most.

5) Name the following

Loss or gain of energy is observed in this change

Q.2 A) Give scientific reason. (Any two)**(4)**

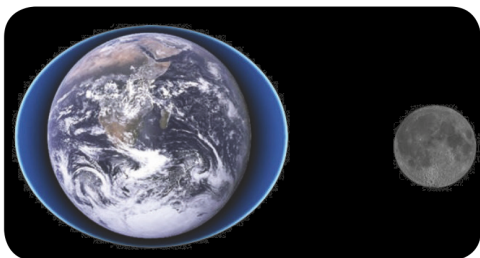
- 1) In DC generator, the flow of current in the circuit is in the same direction.
- 2) During cold nights, sometimes dew is formed.
- 3) Atomic size goes on decreasing while going from left to right within a period.

(B) Solve the following questions. (Any three)**(6)**

- 1) Write short note on Ethanol.
- 2) **Distinguish between**
Ionic compounds and Covalent compounds.
- 3) If two lenses with focal lengths 10 cm and 20 cm respectively are kept in contact with each other, the effective power of combination is

4) **Low tide**

High tide



Low and high tides

- i. What is the reason for high tides and low tides ?
- ii. At which two places do the low tides occur ?

5)

Name	Molecular formula	Condensed Structural	Number of carbon atoms	Number of -CH ₂ units
Ethene	C ₂ H ₄	CH ₂ =CH ₂	2
.....	C ₃ H ₆	CH ₃ -CH=CH ₂	3	1
1-Butene	CH ₃ -CH ₂ -CH=CH ₂	-	-
1-Pentene	C ₅ H ₁₀	-	-

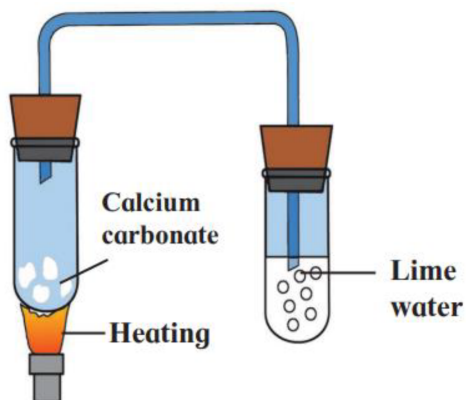
Q.3 Solve the following questions. (Any five)**(15)**

- 1) Complete the table :

Terms	Units of Measurement
Universal gravitational constant
Weight
.....	Kg
.....

Velocity
Acceleration due to gravity
.....	s

- 2) i. A ray of light passes through a point in lens without getting deviated. Name the point.
 ii. Neha used a lens to obtain an image and found that the lens showed magnification less than one irrespective of object distance. Name the type of lens Neha was using.
 iii. Name the part of human eye that acts as a screen for image formation.
 iv. A human eye lens can change its focal length in order to produce clear image. Name this capacity of human eye.
 v. Surabhi uses spectacles made of lens with power -0.5 D. Name the defect of vision Surabhi is suffering from.
 vi. Name the phenomenon due to which an image remains imprinted on retina for $1/16^{\text{th}}$ of second after the object is removed from the front of the eyes.
- 3) How can you relate the formation of water droplets on the outer surface of a bottle taken out of refrigerator with the formation of dew ?
- 4) A coil of insulated wire is connected to a galvanometer. What would be seen if a bar magnet ?
 i. pushed into the coil.
 ii. withdrawn from inside the coil.
 iii. held stationary inside the coil.
- 5) Study the following figure and answer questions.



- i. After heating Calcium carbonate, which gas is formed in a test tube?
 ii. When we pass this gas through limewater what change, did you observe?
 iii. Write down the chemical reaction showing the product formation after heating the Calcium carbonate.
- 6) State the general properties of ionic compounds.
- 7) **Complete the paragraph:**
(outer space, escape velocity, final velocity, space missions, initial velocity, gravitational force, solar system)
 Informations obtained from helps us to understand the creation and evolution of our for such mission, the space craft must escape the earth's to travel in To achieve this, the of the moving object must be greater than of earth.
- 8) i. Show with the help of diagram when a light ray passes from a denser medium to rarer medium.
 ii. Give reason for the same.

Q.4 Solve the following questions. (Any one)

(5)

- 1)
 - i. What is the meaning of the term 'humidity'?
 - ii. Write the formula for percentage relative humidity.
 - iii. Write the units of heat in CGS and MKS system.
 - iv. What are the units of specific heat capacity ?
 - v. How does heat get transferred ?
- 2) Classify the following reactions as combination, decomposition, displacement and double displacement reaction.
 - i. $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$
 - ii. $2\text{HgO} \xrightarrow{\Delta} 2\text{Hg} + \text{O}_2 \uparrow$
 - iii. $2\text{KI} + \text{Cl}_2 \rightarrow 2\text{KCl} + \text{I}_2$
 - iv. $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{HCl}$
 - v. $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2 \uparrow$