

## MODEL QUESTION PAPER SET- 1 : 2021 - 22

STD 10<sup>TH</sup> – SCIENCE -I- (THEORY)

MM : 40

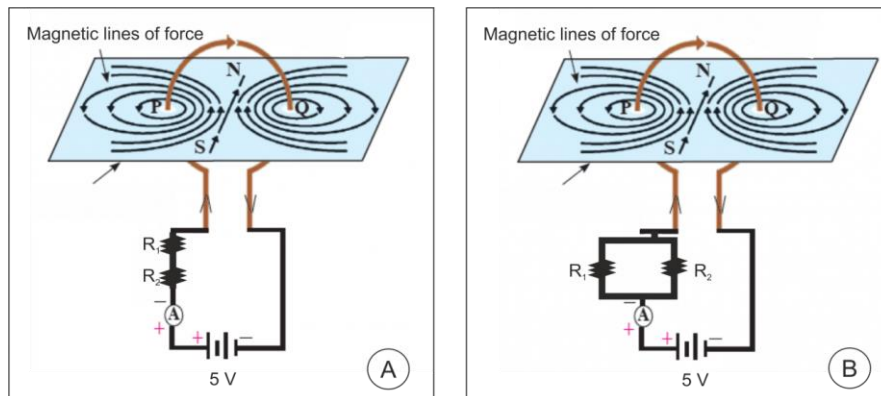
Time : 2 Hrs

## ENTIRE SYLLABUS :

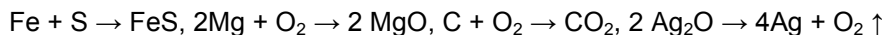
## Q.1 A) Multiple Choice Questions

(5)

- 1) Value of  $g$  is zero at .....
- a. Extreme height      b. Centre of the earth      c. Polar zone      d. Equatorial zone
- 2) Observe the following diagram and choose the correct alternative :



- a. The intensity of magnetic field in A is larger than in B.
- b. The intensity of magnetic field in B is less than in A.
- c. The intensity of magnetic field in A and B is same.
- d. The intensity of magnetic field in A is less than in B.
- 3) Chemical equation can be made more informative by .....
- a. By indicating the physical states of reactants and products.
- b. By indicating the heat changes taking places in the equation.
- c. By indicating the condition under which the reaction takes place.
- d. All of the above.
- 4) The functioning of the satellite launch vehicle is based on
- a. Newton's first law of motion
- b. Newton's Second law of motion
- c. Newton's Third law of motion
- d. None of the above
- 5) When the ray of light is incident normally at the boundary between two media then it -
- a. does not change its direction
- b. does not get refracted
- c. passes undeviated along the same path
- d. All of the above

**(B) Solve the following question****(5)****1) Find the odd one out.****2) Find co-related terms**

Minimum deviation : ..... : maximum deviation : violet light.

**3) Match the pair.**

Column "A"	Column "B"
i. Microscope (Simple)	a. Correction of eye defect
ii. Concave mirror	b. Watch repairer
	c. Torches and head lights

**4) State true or false.**

Silver and gold react with dilute acids.

**5) Name the following**

Write the name and symbol of the element from the description. The most reactive nonmetal.

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

- If the value of 'g' suddenly becomes twice its value, it will become two times more difficult to pull a heavy object along the floor.
- The unsaturated compounds are more reactive than the saturated compounds.
- Tungsten metal used to make solenoid type coil in an electric bulb.

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

- Define Radius of Curvature of lens.
- Explain the similarity and difference in two events, namely adding NaOH to water and adding CaO to water.
- Two tungsten bulbs of power 50 W and 60 W work on 220 V potential difference. If they are connected in the main conductor, find the total current flowing to both the bulbs? Which bulb will consume more current?
- Name 4 substances whose Specific heat capacity is less than 1.

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

**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

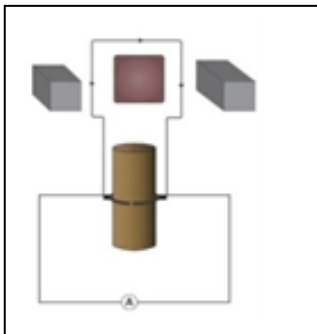
2) Read the statements given below. Identify and write the concept upon which the given statement is based.

- i. Method which involved many steps to balance an equation
- ii. Equations are balanced in accordance with law
- iii. Electric current is passed through acidulated water. Which type of reaction takes place.
- iv. The Rancidity in the food stuff cooked in oil or ghee is prevented by using these. Identify.
- v. This type of reaction takes place during cellular respiration.
- vi. I am used in voters ink. What am I.

3) A rainbow is the combined effect of the refraction, dispersion and total internal reflection of light.

4) On what basis and how are the orbits of artificial satellites classified?

5) Observe the figure and answer the following questions.



- i. Identify the machine shown in figure.
- ii. Write a use of this machine.
- iii. How transformation of energy takes place in this machine.

6) i. What is Iris ?  
 ii. What is Pupil ?  
 iii. What is retina ?

## 7) Complete the paragraph:

(relative humidity, mass, saturated, absolute humidity, unsaturated, kg/m<sup>3</sup>, volume, temperature, g/m<sup>3</sup> humid or dry)

The vapor content in the air is measured using a physical quantity called ..... The ..... of vapor present in a unit volume of air is called absolute humidity. Generally absolute humidity is measured in ..... The feeling of ..... nature of air not only depends on the amount of vapor in the air, but it also depends on how close that amount is for making the air ..... with vapor.

It means that it depends on ..... of the air also.

## 8) What causes the existence of very large number of carbon compound ?

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

(5)

- 1) In the periodic table given below, lithium, carbon oxygen and neon are placed in the correct positions and positions of nine other elements are represented by letter. These letters are not the symbol for the elements.

1	2	13	14	15	16	17	18
lithium			Carbon		oxygen	L	Neon
X			E		G	Q	
Y						R	
Z						T	

- Give the letter of the most reactive metal 1
  - Give the letter for most reactive non metal 1
  - Name the family of elements represented by L, Q, R, T 1
  - Name one elements in each case occurring in group 2, 13 and 15 2
- 2) The electronic configuration of metal 'A' is 2,8,1 and that of metal 'B' is 2,8,2. Which of the two metals is more reactive? Write their reaction with dilute hydrochloric acid.

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