**I.P.S.Sr.Sec.School**

**Max Time : 3 hr** **Class : 10th Science Max Marks : 80**

**Mid Term Exam**

**Section – A**

1. Multiple choice Questions: [ 1 x 20 = 20 ]
2. In the reaction : 2 H2S + SO2 3 S + 2 H2O

|  |  |  |  |
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| a) H2S has been oxidized | b) SO2 has been oxidized | c) H2S is the oxidizing agent | d) SO2 is the reducing agent |

1. Which gas is evolved when acids react with metal carbonates?

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| --- | --- | --- | --- |
| a) CO2 | b) H2 | c) NH3 | d) O2 |

1. 1 Volt is equal to :

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| --- | --- | --- | --- |
| a) 1 J/s | b) 1 J/C | c) 1 N/m | d) 1 C/J |

1. The defective eye of a person has near point 0.5 m and far point is at 3 m. The power for corrective lens required for (i) Reading purpose (ii) Seeing distant objects, respectively are :

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| a) 0.5 D and + 3 D | b) + 2 D and – 1/3 D | c) – 2 D and + 1/3 D | d) 0.5 D and – 0.3 D |

1. Oxygen liberated during photosynthesis comes from :

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| a) Water | b) Chlorophyll | c) Carbon dioxide | d) Glucose |

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| a) pepsin | b) cellulase | c) amylase | d) trypsin |

1. The difference of water molecules in gypsum and plaster of Paris is

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| a) 5/2 | b) 2 | c) 1/2 | d) 3/2 |

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| a) Lactic acid | b) Human blood | c) Oxalic acid | d) Milk |

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| a) brown ppt. | b) pale blue ppt. | c) white ppt. | d) green ppt. |

1. Gastric juice contains

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1. What happen if diameter of artery is reduced ?

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1. Consider the following reaction : p Mg3N2 + q H2O → r Mg(OH)2­ + s NH­3 ,

When the equation is balanced, the coefficients p , q , r , s respectively are :

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| --- | --- | --- | --- |
| a) 1, 3, 3, 2 | b) 1, 6, 3, 2 | c) 1, 2, 3, 2 | d) 2, 3, 6, 2 |

Read the following and answer the questions form 13 to 16.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Metal** | **Iron (II) Sulphate** | **Copper (II) Sulphate** | **Zinc Sulphate** | **Silver nitrate** |
| **A** | No reaction | Displacement | No reaction | Displacement |
| **B** | Displacement | Displacement | Displacement | Displacement |
| **C** | No reaction | No reaction | No reaction | Displacement |
| **D** | No reaction | No reaction | No reaction | No reaction |

1. Which of the following is the most active metal?

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

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| a) A < B < C < D | b) C < A < D < B | c) D < A < C < B | d) D < C < A < B |

1. Which of the following metal container can be used to store both zinc sulphate solution and silver nitrate solution?

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| a) A | b) D | c) C | d) All of these |

**Read the following and answer the questions given below**

Q. No. 16 to 20 are based on the table given below.

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| Sr. No. | Name of process | Word equation |
| 1 | Combustion | Magnesium + Oxygen Magnesium oxide |
| 2 | Photosynthesis | Carbon dioxide + water Glucose + Oxygen + water |
| 3 | Combination | Iron + sulphur Iron sulphide |
| 4 | Decomposition | Calcium carbonate Calcium oxide + Carbon dioxide |

1. The reaction in which 2 or more substances combine to form a single substance under suitable conditions is

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| a) Combination reaction | b) Displacement reaction |
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1. Which of the following is essential for photosynthesis?

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| a) Sunlight | b) Chlorophyll | c) Glucose | d) Both (a) & (b) |

1. When a chemical compound decomposes on absorbing light and energy, then the reaction which takes place is known as

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| a) Photosynthesis | b) Photodecomposition |
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1. Which of the following reactions is an example of combustion reaction?

|  |  |
| --- | --- |
| a) C (s) + O2 (g) CO2 (g) | b) Zn (s) + H2SO4 (aq) ZnSO4 (aq) + H2 (g) |
| c) Zn (s) + 2 HCl (aq) ZnCl2 (aq) + H2 (g) | d) 3 Mg (s) + N2 (g) Mg3N2 (s) |

**Section – B [ 1 X 8 = 8 ]**

1. Write the SI unit of resistivity
2. Draw the symbol for an ammeter
3. What is the final product of proteins, carbohydrates and fats digestion
4. Write two different uses of concave mirrors.
5. What should be the position of the object when a concave mirror is to be used as a doctor’s mirror?
6. Which compound gives shiny white finish to the walls?
7. Name the enzyme present in infants but may be absent in adults.
8. Give the energy transformation that takes place in the process of photosynthesis.

**Section – C [ 2 X 8 = 16 ]**

1. In the given series of reactions, what are Y and Z respectively?

NaCl + H2O + CO2 + NH3 X + Y Z Q

**OR**

Write the chemical formula of bleaching powder. How is bleaching powder prepared?

1. Name a metal which : (i) is the best conductor of heat (ii) Has a very low melting point

(iii) Does not react with oxygen even at high temperature. (iv) Is most ductile

1. (i) Would it be right to store a solution of silver nitrate (AgNO3) in copper vessel? Explain

(ii) What type of oxides are formed when non-metals combine with oxygen?

1. An object is placed at 2 F­1 in front of convex lens. What is the (a) position (b) size (c) nature of image?
2. (i) Define nutrition. What are the different modes of nutrition?

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1. An object is placed at a distance of 12 cm in front of a concave mirror of radius of curvature 30 cm. List four characteristics of the image formed by the mirror
2. A person needs a lens of power – 4.5 D for correction of her vision.
3. What kind of defect in vision is she suffering from? (ii) What is the focal length of corrective lens?
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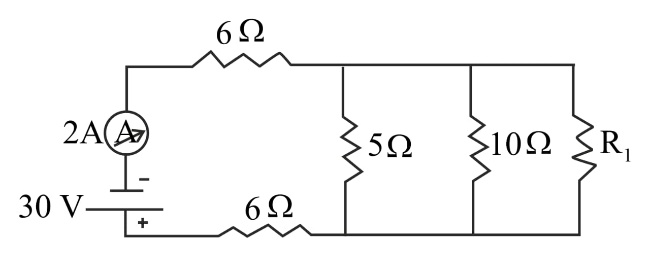
**Section – D [ 3 X 7 = 21 ]**

1. A concave mirror produces a real image 10 mm tall, of an object 2.5 mm tall placed at 5 cm from the mirror. Calculate focal length of the mirror and the position of the image?
2. When an object is placed at a distance of 60 cm from a convex spherical mirror, the magnification produced is 1/2. Where the object should be placed to get a magnification of 1/3?
3. A person is able to see objects clearly only when these are lying at distance between 50 cm and 300 cm from his eye.
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Describe the process of nutrition in Amoeba with the help of diagram.

1. In the below circuit, if the current reading in the ammeter ‘A’ is 2 A, what would be the value of R1?



1. A metal ‘X’ when added to a solution containing ZnSO4 shows no change in the colour of the solution. The metal ‘X’ is also used to join railway tracks.

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1. Give two important uses of washing soda and baking soda.
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3. AgNO3 + NaCl AgCl + NaNO3 (b) Zn + CuSO4 ZnSO4 + Cu

(ii) Translate the following into a balanced chemical equation:

Barium chloride reacts with aluminium sulphate to give aluminium chloride and barium sulphate.

**Section – E [ 5 X 3 = 15 ]**

1. (a) Draw a diagram depicting human alimentary canal and label on it: gall bladder , Liver and Pancreas.

(b) State the role of Liver and pancreas.

(c) Name the organ which performs the following functions in human.

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1. (a) Plaster of Paris should be stored in a moister-proof container. Explain why?

(b) (i) Write the electron dot structures of sodium, oxygen and magnesium.

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**Or**

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**Mid Term Exam Code : A**

**Section – A**

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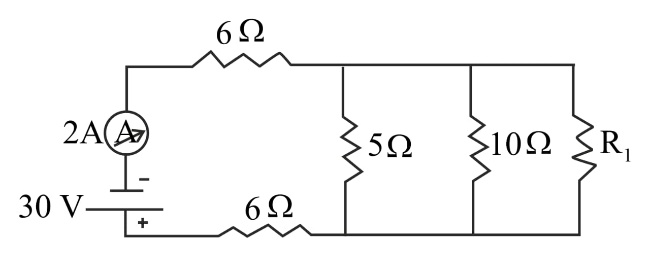
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**Max Time : 3 hr** **Class : 10th Science Max Marks : 80**

**Mid Term Exam Code : B**

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4. Which compound gives shiny white finish to the walls?
5. Name the enzyme present in infants but may be absent in adults.
6. Draw the symbol for an ammeter
7. What is the final product of proteins, carbohydrates and fats digestion
8. Give the energy transformation that takes place in the process of photosynthesis.

**Section – C [ 2 X 8 = 16 ]**

1. (i) Would it be right to store a solution of silver nitrate (AgNO3) in copper vessel? Explain

(ii) What type of oxides are formed when non-metals combine with oxygen?

1. An object is placed at 2 F­1 in front of convex lens. What is the (a) position (b) size (c) nature of image?
2. (i) Define nutrition. What are the different modes of nutrition?

(ii) What is the role of hydrochloric acid in our stomach?

1. An object is placed at a distance of 12 cm in front of a concave mirror of radius of curvature 30 cm. List four characteristics of the image formed by the mirror
2. In the given series of reactions, what are Y and Z respectively?

NaCl + H2O + CO2 + NH3 X + Y Z Q

**OR**

Write the chemical formula of bleaching powder. How is bleaching powder prepared?

1. Name a metal which : (i) is the best conductor of heat (ii) Has a very low melting point

(iii) Does not react with oxygen even at high temperature. (iv) Is most ductile

1. A person needs a lens of power – 4.5 D for correction of her vision.
2. What kind of defect in vision is she suffering from? (ii) What is the focal length of corrective lens?
3. Show how would you connect three resistors, each of resistance 6 , so that the combination has a resistance of :

(i) 9 (ii) 4

**Section – D [ 3 X 7 = 21 ]**

1. A metal ‘X’ when added to a solution containing ZnSO4 shows no change in the colour of the solution. The metal ‘X’ is also used to join railway tracks.

(i) Identify the metal ‘X’. (ii) What is the other reactant used in the reaction with ‘X’ to join railway tracks?

(iii) Name the method to extract the metal ‘X’.

1. Give two important uses of washing soda and baking soda.
2. (i) Classify the following reactions into different categories :
3. AgNO3 + NaCl AgCl + NaNO3 (b) Zn + CuSO4 ZnSO4 + Cu

(ii) Translate the following into a balanced chemical equation:

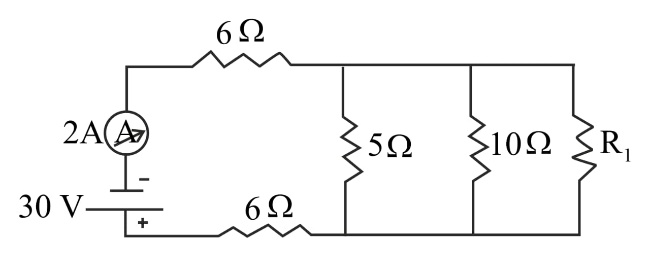
Barium chloride reacts with aluminium sulphate to give aluminium chloride and barium sulphate.

1. A concave mirror produces a real image 10 mm tall, of an object 2.5 mm tall placed at 5 cm from the mirror. Calculate focal length of the mirror and the position of the image?
2. When an object is placed at a distance of 60 cm from a convex spherical mirror, the magnification produced is 1/2. Where the object should be placed to get a magnification of 1/3?
3. A person is able to see objects clearly only when these are lying at distance between 50 cm and 300 cm from his eye.
4. What kind of defect of vision he is suffering from?
5. What kind of lenses will be required to increase his range of vision from 25 cm to infinity? Explain briefly.

**Or**

Describe the process of nutrition in Amoeba with the help of diagram.

1. In the below circuit, if the current reading in the ammeter ‘A’ is 2 A, what would be the value of R1?



**Section – E [ 5 X 3 = 15 ]**

1. (a) Plaster of Paris should be stored in a moister-proof container. Explain why?

(b) (i) Write the electron dot structures of sodium, oxygen and magnesium.

(ii) Show the formation of Na2O and MgO by transfer of electrons.

(iii) What are the ions present in these compounds?

**Or**

(a) Explain digestion of carbohydrates in human beings.

(b) Explain Photolytic decomposition reaction with example.

1. (a) A geyser is rated 1500 W, 250 V. It is connected to 250 V mains. Calculate the (i) current drawn , (ii) the energy consumed in 50 hours . (iii) the cost of the energy consumed at Rs. 2.20 per kWh.

(b) Explain law of reflection.

1. (a) Draw a diagram depicting human alimentary canal and label on it: gall bladder , Liver and Pancreas.

(b) State the role of Liver and pancreas.

(c) Name the organ which performs the following functions in human.

(i) Absorption of digested food (ii) Absorption of water.