School Connect Online

ISO 2022-23

Class 10

SCO International Science Olympiad

Total Questions - 35	Maximum Mark - 105	Duration - 1 hr
	Pattern and Marking Scheme	
No. of Questions	35	-
Marks Per Question	3	

Syllabus	International Science Olympiad (ISO) 2022-23 SET - AH 7
Grade 10	Chemical Reaction and Equation,Acid Bases and Salt,Metals and Non Metals,Carbon and Its Compounds,Periodic Classification of Elements,Life Processess,Control and Coordination,How do Organisms reproduce ,Heredity and Evolution,Our Environment,Management of Natural Resources,Electricity,Magnetic Effects of Electric Current,Sources of Energy,Light Reflection,Light Refraction

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Guidelines for the Candidate

1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
2. Write your Name, School Code, Class, Roll No. and Mobile Number clearly on the OMR Sheet and do not forget to sign it. We will share your marks / result and other information related to Olympiad exams on your mobile number.
3. The Question Paper comprises sections: reasoning, subjective, achievers' section
4. All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
5. There is only ONE correct answer. Choose only ONE option for an answer.
6. To mark your choice of answers by darkening the circles on the OMR Sheet, use HB Pencil or Blue / Black ball point pen only
7. Rough work should be done in the blank space provided in this booklet.
8. Return the OMR Sheet to the invigilator at the end of the exam.
9. Please fill in your personal details in the space provided on this page before attempting the paper.

A student in class X was doing an experiment in a chemistry lab, he mixed lead nitrate and potassium iodide. After completing the experiment, he observed a lot of changes in the test tube.

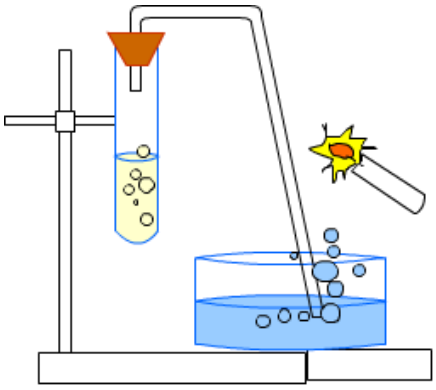
1. He saw a yellow precipitate of:

a. Potassium Nitrate.
b. Lead Iodide.
c. Potassium Iodide.
d. Potassium Oxide.

2. The chemical reaction involved in this reaction is:

a. $Pb(NO_3)_3 + KI \rightarrow PBI_2 + 2KNO_3$
b. $Pb(NO_3)_2 + 2KI \rightarrow PBI_2 + 2KNO_3$
c. $Pb(NO_3)_2 + 3KI \rightarrow PBI_2 + 3KNO_3$
d. $Pb(NO_3)_3 + 3KI \rightarrow PBI_2 + 3KNO_3$

3. When metals react with acid, hydrogen gas is evolved but when some metal reacts which nitric acid, hydrogen gas is evolved. The metal is:



a. Aluminium
b. Copper
c. Magnesium
d. Sodium

4. The chemical name and formula of plaster of Paris is written as:

a. Calcium Sulphate decahydrate $CaSO_4.10H_2O$
b. Calcium Sulphate hemihydrate $CaSO_4.1/2H_2O$
c. Calcium Sulphate dehydrate $CaSO_4$
d. Calcium Sulphate dihydrate $CaSO_4.2H_2O$

5. Which of the following statement is correct:

a. Copper sulphate contains two molecules of water of crystallisation
b. Copper sulphate contains three molecules of water of crystallisation
c. Copper sulphate contains four molecules of water of crystallisation
d. Copper sulphate contains five molecules of water of crystallization

6. Match the items given in column A with the column B –

Column A	**Column B**
1. Ferrous Sulphate + heat	i) Exothermic reaction
2. Barium chloride + Sodium sulphate	ii) displacement
3. Respiration	iii) Precipitation reaction
4. Copper sulphate solution + Zinc	iv) Decomposition reaction

a. 1-(iii), 2-(ii), 3-(iv), 4-(i)
b. 1-(iv), 2-(iii), 3-(i), 4-(ii)
c. 1-(i), 2-(ii), 3-(iv), 4-(iii)
d. 1-(ii), 2-(iv), 3-(i), 4-(iii)

7. Which of the statements are true about the organic compounds:

I. Saturated hydrocarbon compounds show addition reaction.

II. Unsaturated hydrocarbon compounds show hydrogenation

III. Butane shows hydrogenation

IV. Unsaturated hydrocarbon compounds are reactive.

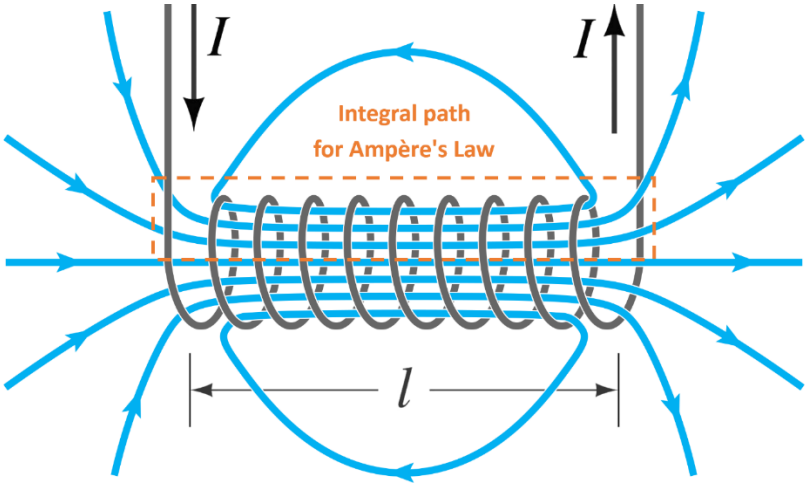
a. (i), (ii)

b. (ii), (iii),(iv)

c. (ii), (iv)

d. (ii), (iv)

Answer the Q- 8 and 9 on the basis of the diagram given below:



8.What type of energy conversion is observed in a solenoid?

a. Kinetic to Electrical
b. Electrical to Kinetic
c. Electrical to Magnetic
d. Magnetic to Electrical

9. The strength of magnetic field produced by a solenoid can be increased by:

a. Increasing number of cells
b. Increasing the number of turns of wire
c. Interchanging the polarities of the battery
d. Both (a) and (b)

10. The image of an object formed by a lens is magnification -1. If the distance between the object and lens is 30cm. What will be its focal length?

a. 30.5cm

b. 30cm

c. 15cm

d. 7.5cm

Answer Keys:

Ques. 1	(c)	**Ques. 6**	(b)
Ques. 2	(b)	**Ques. 7**	(d)
Ques. 3	(c)	**Ques. 8**	(c)
Ques. 4	(b)	**Ques. 9**	(d)
Ques. 5	(b)	**Ques. 10**	(d)

SPACE FOR ROUGH WORK

SCO International English Olympiad 2022-23

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