School Connect Online

ISO 2022-23

Class 12

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 12	

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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.

1. GEAC stands for:

a. Genome Engineering Action Committee
b. Ground Environment Action Committee
c. Genetic Engineering Approval Committee
d. Genetic and Environment Approval Committee

2. The C-peptide of human insulin is:

a. A part of mature insulin molecule
b. Responsible for formation of disulphide bridges
c. Removed during maturation of pro-insulin to insulin
d. Responsible for its biological activity.

3. Approximately how much of the solar energy that falls on the leaves of a plant is converted to chemical energy by photosynthesis?

a. Less than 1%
b. 2-10%
c. 30%
d. 50%

4. Which of the following reagents would not be a good choice for reducing an aryl nitro compound to an amine?

a. H_2 (excess)/Pt
b. $LiAlH_4$ in ether
c. Fe and HCl
d. Sn and HCl

5. Which of the following options are correct for $[Fe(CN)_6]^{3-}$ complex?

a. d^2sp^3 hybridisation
b. sp^3d^2 hybridisation
c. (c) paramagnetic
d. (d) diamagnetic

6. The correct colour order of acidity of following oxy-acids is:

a. $HClO_4 < HClO_3 < HClO_2 < HClO$
b. $HClO < HClO_2 < HClO_3 < HClO_4$

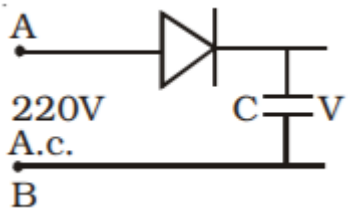
c. $HClO < HClO_4 < HClO_3 < HClO_2$
d. $HClO_4 < HClO_2 < HClO_3 < HClO$

7. Choose the correct answer out of the following choices:

Assertion - Haloalkanes are slightly soluble in water.
Reason - Intermolecular attractions between haloalkanes and solvent molecules have much more strength than intermolecular attractions between haloalkane molecules.

a. Both assertion and reason are correct statements, and reason is the correct explanation of the assertion.
b. Both assertion and reason are correct statements, but reason is not the correct explanation of the assertion.
c. The assertion is correct, but the reason is an incorrect statement.
d. An assertion is incorrect, but a reason is a correct statement.

8. A 220 V A.C. supply is connected between points A and B in below figure. What will be the potential difference V across the capacitor?



a. 220V
b. 110V
c. 0V
d. 220√2 V

9. The radius of curvature of the curved surface of a plano-convex lens is 20 cm. If the refractive index of the material of the lens be 1.5, it will:

a. act as a convex lens only for the objects that lie on its curved side.
b. act as a concave lens for the objects that lie on its curved side.
c. act as a convex lens irrespective of the side on which the object lies.
d. act as a concave lens irrespective of side on which the object lies.

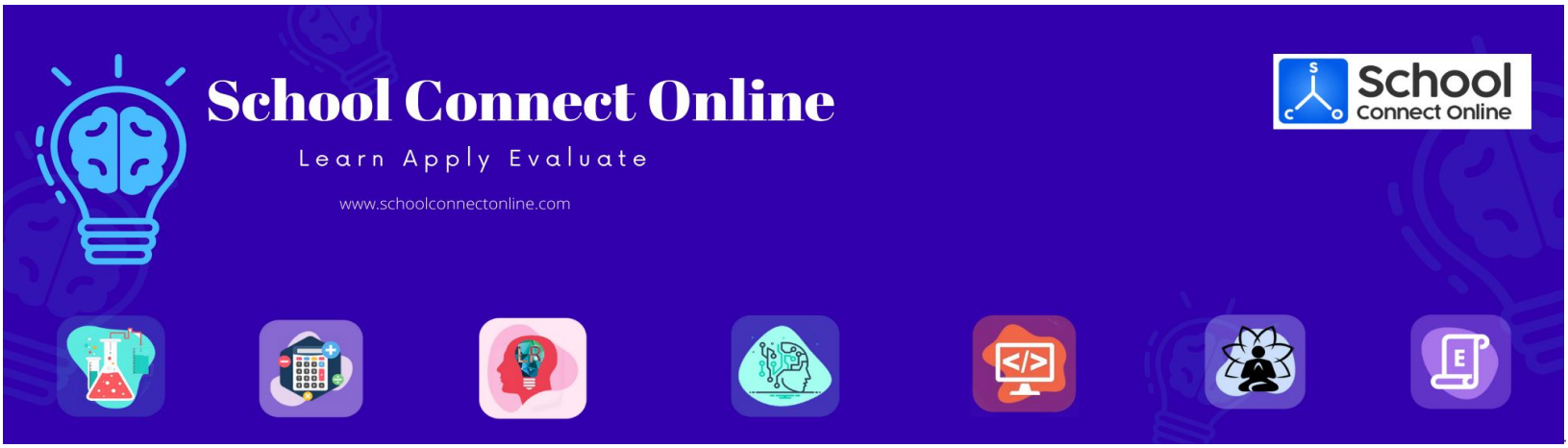
10. The electrical conductivity of the metal decreases with temperature, because:

a. The energy of the electrons increases with temperature.
b. A metal expands on heating.
c. The atoms of the metal vibrate more at higher temperatures.
d. Metals have low specific heat.

Answer Keys:

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

SPACE FOR ROUGH WORK



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