



EDUHEAL FOUNDATION

EDUHEAL FOUNDATION CONDUCTS 8 OLYMPIADS ANNUALLY REACHING OUT TO 3,500 + SCHOOLS

• 5 LAKH + STUDENTS • 50,000 TEACHERS AND HAVING 500 RESOURCE PERSONS

IN ENGLISH / MATHS / SCIENCE / BIOTECH / COMPUTER / G.K. / ARTS / CRICKET / FINANCE & 300 REGIONAL COORDINATORS.

WEBSITE : WWW.EDUHEALFOUNDATION.ORG • E-MAIL : INFO@EDUHEALFOUNDATION.ORG

ICO INTERNATIONAL CYBER OLYMPIAD	NISO NATIONAL INTERACTIVE SCIENCE OLYMPIAD	NIMO NATIONAL INTERACTIVE MATHS OLYMPIAD	NBTO NATIONAL BIOTECHNOLOGY OLYMPIAD	IEO INTERNATIONAL ENGLISH OLYMPIAD	IGO INTERNATIONAL G.K. OLYMPIAD	BIFO BSE INTERNATIONAL FINANCE OLYMPIAD
---	---	---	--	---	--	--

**NATIONAL
INTERACTIVE
SCIENCE
OLYMPIAD**

N I S O

**10
Class**

**A1
Paper
Code**

L E V E L - 1

Academic Partner — WWW.EDUSYS.IN



Google
Science
Fair



Level - 1 : All Level-1 successful* participants will get certificate, aptitude report and online subscription, and school toppers will be eligible for school hero medals.

Level - 2 : School toppers* will be selected for level-2-National level - online computer based interactive test held at exam centres all over India. Besides selection for level-3, winner will get merit certificate, medals, educational CDs, laptop, scholarship and other prizes. There is no level 2 in G.K. and Biotech.

Level - 3 : Toppers will qualify# for level 3-International level-where you will compete with students globally. Get selected for EHF's International Olympiad training camp. Only Indian organization giving students exposure to global competitions. Represent India & win laurels. Guidance by top scientists. Prizes ranges from cash (millions of \$), gadgets, foreign trips, publicity, fame, scholarships, Internships, conference participation and more. Level 3 is in Maths, Science & Cyber only.

See prospectus/website for details

- You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET (OMR)**. **STUDENTS OF CLASS 1 & 2 HAVE TO UNDERLINE** THE CORRECT ANSWER IN THE QUESTION PAPER ITSELF. THEY ARE NOT REQUIRED TO USE THE RESPONSE SHEET (OMR). THEY HAVE TO FILL THEIR NAME, ROLL NUMBER, CLASS, SCHOOL NAME IN THE SPACE PROVIDED IN THE QUESTION PAPER.
- The question paper is made as per syllabus guidelines & pattern given in the information Booklet. The Question Paper for Classes 1 to 6 contains 25 Questions each to be answered in 40 minutes. The Question paper for classes 7 to 12 contains 50 Questions each to be answered in 60 minutes. All questions are compulsory. Further instructions are given in the instruction letter to the teacher.
- Use the response sheet to mark your responses by darkening the required circle. The response sheet has to be returned to the foundation, duly filled in. The student can retain the Question Paper except for classes 1 and 2.

GENERAL IQ

- Karan is taller than Pushpa but not as tall as Manish. Rama is taller than Namita but not as tall as Pushpa. Who among them is the tallest ?
 (1) Manish (2) Rama
 (3) Pushpa (4) None of these
- Raman is sitting to the immediate left of Harry but not next to Kamal. Mahesh is sitting to the right of Kamal. If the four friends are sitting in a circle who is sitting to the immediate right of Harry ?
 (1) Mahesh (2) Raman
 (3) Kamal (4) None of these
- If water is called black, black is called tree, tree is called blue, blue is called rain, rain is called pink and pink is called fish in a certain language, then what is the colour of sky called in that language ?
 (1) Pink (2) Fish
 (3) Rain (4) None of these
- Find the odd one out of the following
 (1) Relation (2) Child
 (3) Father (4) None of these
- Which letter is the 8th letter to the right of the letter which is 12th from the left ?
 (1) V (2) T
 (3) W (4) None of these
- If in a certain language SURGEON is coded as HRITVLM, how is PHYSICIAN coded in that language ?
 (1) KSBHRXRZM (2) LTAKJYJUP
 (3) IETWSOSHK (4) None of these
- Geeta is elder to Seeta but not to Deepa. Gayatri is younger than Deepa. No one is elder to Fatima. Who is the youngest of them all ?
 (1) Seeta (2) Geeta
 (3) Gayatri (4) None of these
- What should come in the place of (?) in the given series ?

ACE, FGH, ?, PON

- (1) KKK (2) JKI
(3) HJH (4) None of these

9. Pointing to a photograph of Mahesh, Ram said, "The father of his sister is the husband of my wife's mother." How is Ram related to Mahesh ?
(1) Brother (2) Brother-in-law
(3) Father-in-law (4) None of these
10. A, B, C, D and E play a game of cards. A says to B, "If you give me three cards, you will have as many as E has and if I give you three cards, you will have as many as D has," A and B together have 10 cards more than what D and E together have. If B has two cards more than what C has and the total number of cards be 133, how many cards does B have ?
(1) 22 (2) 23
(3) 25 (4) None of these

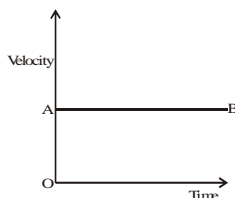
GENERAL SCIENCE

11. Which of the following will diffuse faster ?
(1) A drop of ink in water (2) Oxygen in nitrogen
(3) Milk in water (4) None of these
12. On heating, temperature of the system does not change
(1) After the melting point is reached, till the entire solid melts.
(2) Before the melting point is reached, till all of the solid melts.
(3) Till solid completely changes into vapour.
(4) None of these.
13. The principle behind fractional distillation technique in the separation of two liquids is
(1) Difference in melting point
(2) Difference in boiling point
(3) Difference in concentration point
(4) None of these
14. The introduction of a neutron into the nucleus of an atom would lead to a change in
(1) The number of electrons
(2) Its atomic number
(3) Its atomic weight
(4) None of these
15. The organelle attached to the endoplasmic reticulum is
(1) Ribosomes (2) Lysosomes
(3) Golgi bodies (4) None of these
16. Plant cell wall is composed of
(1) Lignin (2) Cellulose
(3) Suberin (4) None of these
17. The tissue that forms the external ear, the end of the nose

and the walls of the trachea is

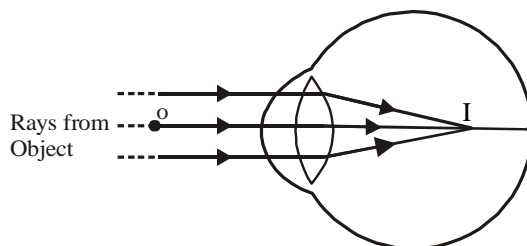
- (1) Permanent cartilage (2) Temporary cartilage
(3) Spongy bone (4) None of these
18. Monocotyledons and Dicotyledons are the divisions of
(1) Gymnosperms (2) Angiosperms
(3) Both 1 and 2 (4) None of these
19. The largest of all invertebrates is the
(1) Octopus (2) Sea urchin
(3) Giant squid (4) None of these
20. Area under the velocity time graph indicates
(1) Magnitude of displacement
(2) Magnitude of acceleration
(3) Both magnitude and direction of displacement
(4) None of these
21. The stethoscope used by doctors works on the principle of
(1) Interference of sound (2) Reflection of sound
(3) Refraction of sound (4) None of these
22. When a body of mass m revolves with uniform speed v on a circular path of radius r work done by the body in one complete revolution is
(1) $\frac{1}{2}mv^2$ (2) $2\pi mv^2$
(3) Zero (4) None of these
23. Work done by a force can be
(1) Only positive
(2) Only negative
(3) Both positive and negative
(4) None of these
24. When the glass rod is rubbed with silk, which charge is produced on each of the rods?
(1) Glass rod - positive charge; silk - negative charge.
(2) Glass rod - negative charge; silk - positive charge
(3) Glass rod - neutral; silk - negative charge
(4) None of these
25. The least distance of vision for a normal eye is
(1) 1 m. (2) 25 cm.
(3) 30 cm. (4) None of these
26. The current which is unidirectional is
(1) AC (2) DC
(3) Either (1) or (2) (4) None of these
27. Which of the following statements is false ?
(1) The states of matter are inter-convertible
(2) Evaporation is a surface phenomenon
(3) The arrangement of particles is most ordered in the case of liquids
(4) None of these

28. Ethyl alcohol is completely miscible with water. It can be separated from a mixture of the two liquids by
- Using a separating funnel
 - Evaporation
 - Fractional distillation
 - None of these
29. A force of 100 N acts on a ball moving on the surface. The force of friction that must act to keep the ball moving will be
- zero
 - 100 N
 - 200 N
 - None of these
30. Which of the following vitamin is necessary for blood clotting ?
- Vitamin K
 - Vitamin A
 - Vitamin D
 - None of these
31. Fertilizers ensure increased vegetative growth and healthy plants by supplying
- Nitrogen, Carbon and Oxygen
 - Nitrogen, Phosphorus and Potassium
 - Phosphorus, Calcium and Oxygen
 - None of these
32. How many chromosomes are present in prokaryotic cells ?
- One
 - Two
 - Many
 - None of these
33. Name the chemical that is present in nail polish remover which evaporates quickly to give a cooling effect
- Water
 - Acetic acid
 - Acetone
 - None of these
34. Molecules of water enter from solution A to solution B. Which of the following statement is true ?
- Solution B is hypertonic to solution A
 - Solution A is hypertonic to solution B
 - Solution B is hypotonic to solution A
 - None of these
35. The tissue in leaf stalks below the epidermis is made up of
- Collenchyma
 - Sclerenchyma
 - Parenchyma
 - None of these
36. Hydra, Jelly fish and Sea Anemones belong to
- Porifera
 - Coelenterata
 - Platyhelminthes
 - None of these
37. In the given velocity-time graph AB shows that the body has
- Uniform acceleration
 - Uniform deceleration
 - Uniform velocity throughout the motion
 - None of these



38. Newton's second law gives the measure of
- Acceleration
 - Force
 - Momentum
 - None of these
39. The force that causes acceleration and keeps the body moving along the circular path is acting
- Towards the centre
 - Away from the centre
 - Along the tangent to the circular path
 - None of these
40. The velocity of sound in air increases with
- Rise of its frequency
 - Decrease in humidity of air
 - Rise of temperature
 - None of these

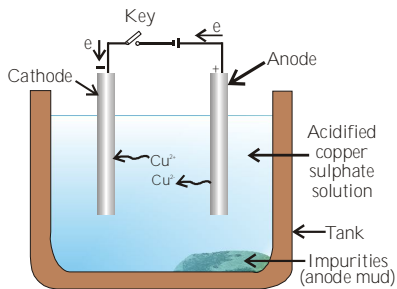
EtG INTERACTIVE SECTION



Based on the above diagram answer the questions nos. 41 to 43

41. Which defect of vision has been shown in the above diagram ?
- Hypermetropia
 - Myopia
 - Astigmatism
 - None of these
42. What do the points O and I represent ?
- The points O and I represent the far point and the retina respectively
 - The points O and I represent the near point and the lens respectively
 - The points O and I represent the size of the image and retina respectively
 - None of these
43. Which lens is used to correct this defect ?
- Convex lens
 - Concave lens
 - Bifocal lens
 - None of these

44. In the electrolytic refining of copper, crude copper contains small amounts of iron, silver and gold. Of these which metal will dissolve in the solution and remain there ?

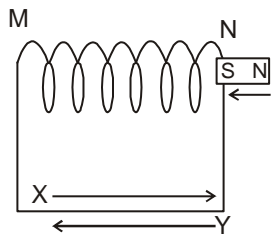


- (1) Iron
- (2) Gold
- (3) Silver
- (4) None of these

45. In the above question, which metal falls below the anode in the electrolytic cell as anode mud ?

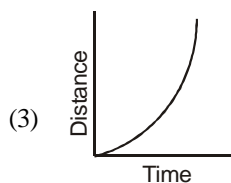
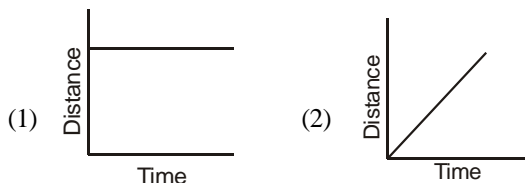
- (1) Iron and gold
- (2) Gold and silver
- (3) Iron and silver
- (4) None of these

46. A bar magnet is thrust into a coil of wire as shown in the diagram. Which of the following statements as per this experiment is correct ?



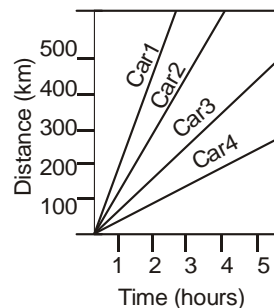
- (1) The polarity of the coil at N is south, at M is north and the induced current is indicated by an arrow Y
- (2) The polarity of the coil at N is north, at M is south and the induced current is indicated by an arrow X
- (3) The polarity of the coil at N is south, at M is north and the induced current is indicated by an arrow X
- (4) None of these

47. Which graph best represents the motion of a block accelerating uniformly down an inclined plane ?



- (3) (4) None of these

48. The graph below shows the distance and time travelled by four cars.



Which car travelled the slowest ?

- (1) Car 3
- (2) Car 4
- (3) Car 2
- (4) None of these

49. A single prokaryotic cell can divide several times in an hour. Few eukaryotic cells can divide as quickly. Which of the following statements best explains this difference ?

- (1) Eukaryotic cells are more structurally complex than prokaryotic cells.
- (2) Eukaryotic cells have less DNA than prokaryotic cells.
- (3) Eukaryotic cells have more cell walls than prokaryotic cells.
- (4) None of these

50. Atoms of element A and atoms of element B react to form a compound. In the reaction, the radius of each atom of element A is decreased. Which of the following explains this decrease in atomic radius in the reaction ?

- (1) The atoms of element A lose electrons to atoms of element B
- (2) The atoms of element A gain neutrons from atoms of element B
- (3) Nuclear particles are converted into energy in atoms of element A
- (4) None of these



END OF THE EXAM