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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
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Level - 1 : Level-1 winners will get certificate, aptitude report, medals for the school toppers and online subscription.

Level - 2 : Top 10 % including 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, aptitude report, medals, Mp3 player, watches, educational CDs, laptop, scholarship, online subscription etc.

Level - 3 : Top 1% 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.

- You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET**.
- 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 coordinator 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.

NATIONAL INTERACTIVE SCIENCE OLYMPIAD

N I S O

7 Class	A1 Paper Code
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LEVEL - 1

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GENERAL IQ

- If in a language ORANGE is coded as 369475 and EARTH is coded as 59612, then how is ANGER coded in that language?

(1) 94657	(2) 97564
(3) 94756	(4) None of these
- In the following question, a set of figures carrying certain characters is given. Assuming that the characters in each set follow a similar pattern, find the missing character at position?

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(1) 6	(2) 12
(3) 24	(4) None of these
- How close of a relative would the sister-in-law of your dad's only brother be to you?

(1) Your mom	(2) Your aunt
(3) Your grandma	(4) None of these

- When red is X, green is Y. When green is not Y, blue is Z. But blue is never Z as long as red is X. Therefore which one of these statements is correct?

(1) While blue is Z, green is Y
(2) While red is not X, blue is not Z.
(3) While green is not Y, red is not X.
(4) None of these
- Today is Wednesday. What will the fourth day from yesterday be?

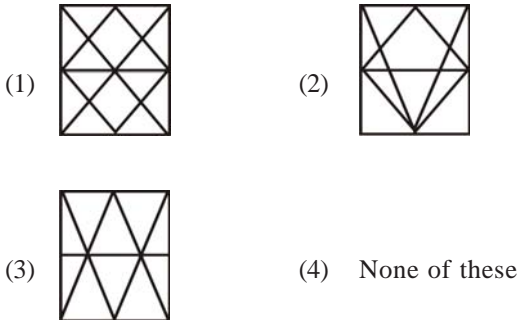
(1) Sunday	(2) Thursday
(3) Saturday	(4) None of these

GENERAL SCIENCE

- Read the following statements and choose the correct answer.
Lamp A is less bright than Lamp B
Lamp B is brighter than Lamp C
Lamp C is as bright as Lamp D
Lamp B is brighter than Lamp D
Which of the following lamp is the brightest?

(1) Lamp A	(2) Lamp B
(3) Lamp C	(4) None of these

7. Which letter in English alphabet is formed when you go uphill, then down hill and go across in the middle.
- (1) A (2) E
(3) F (4) None of these
8. In the Smith family there are mother, father and 7 daughters. Each girl has one brother. How many members are there in the family?
- (1) 10 (2) 14
(3) 11 (4) None of these
9. In which of the following figures figure 'X' is embedded?



10. Which number comes next in the following series
4, 5, 8, 17, 44, _____
- (1) 80 (2) 125
(3) 112 (4) None of these
11. Which are the 3 primary nutrients required for plant growth?
- (1) Calcium, Potassium, Sodium
(2) Manganese, Sulphur, Zinc
(3) Nitrogen, Phosphorous, Potassium
(4) None of these
12. Give example for uniform motion.
- (1) A racing horse (2) A train going along the track at steady speed
(3) A roller coaster (4) None of these
13. Two children are having fun using the seesaw. This is an example for which simple machine ?



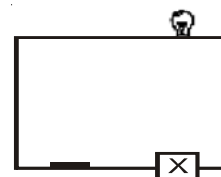
- (1) Gear (2) Balance
(3) Lever (4) None of these
14. Which of the following method is used to separate pebbles and stones from sand?
- (1) Sieving (2) Winnowing
(3) Hand Picking (4) None of these

15. Which of the following statement is false?
- (1) A charged body attracts an uncharged body due to redistribution of charges in the uncharged body.
(2) An electric discharge occurs through a small air gap when the insulation of air breaks down due to a large amount of charge passing across it.
(3) A charged body when brought in contact with the earth gains its charge due to earthing.
(4) None of these.
16. Which of the following is not a consequence of deforestation?
- (1) Global Warming
(2) Population explosion
(3) endangered human and animal existence
(4) None of these
17. A simple pendulum is an example for
- (1) Random motion (2) Periodic motion
(3) Rectilinear motion (4) None of these
18. Which of the following statements regarding chlorophyll is true?
- (1) Chlorophyll absorbs all wavelengths of visible light except green which it reflects to be detected by our eyes.
(2) Chlorophyll molecules are specifically arranged in and around photosystems that are embedded in the thylakoid membranes of chloroplasts.
(3) Both 1 and 2.
(4) None of these.
19. Two simple pendulums have the same period of oscillation. The necessary condition for this is that
- (1) Their lengths are different but the suspended particles must have the same length.
(2) Their lengths are equal and the suspended particles have the same mass.
(3) The masses of the suspended particles must be in the inverse ratio of the lengths of the pendulums
(4) None of these.
20. Which of the following is not true?
- (1) If the air resistant drag and other friction forces are greater than the engine power of the car, the car will slow down.
(2) Tyres grip the road using the force of friction.
(3) If the foot is taken off the accelerator pedal, the car slows down because the drag or friction force is reduced.
(4) None of these.

21. Which of the following mirrors is used by dentists and in optical instruments.
- Concave mirrors
 - Convex mirrors
 - Plane mirrors
 - None of these
22. How are shadows formed?
- They are formed by the light passing through an object.
 - They are formed by an opaque object blocking the path of light.
 - They are formed by light reflecting from an object
 - None of these.
23. If we change the wire in the circuit from a straight thick wire to a straight thin wire,
- The bulbs will burst.
 - The bulbs stay at the same level of brightness.
 - The bulbs become dimmer.
 - None of these.
24. Which of the following statement is correct?
- Fishes respire through air-bladder.
 - Blood is red because of the presence of haemoglobin.
 - RBCs protect us from diseases.
 - In human beings urea is the nitrogenous excretory product.
- (ii) and (iv)
 - (i) and (ii)
 - (ii) and (iii)
 - None of these
25. When a bar magnet is freely suspended, it aligns along
- North - South direction
 - North-East direction
 - South - West direction
 - None of these
26. Which of the following correctly represents a part of the water cycle?
- Precipitation → run off → evaporation → condensation
 - Condensation → Precipitation → evaporation → run off
 - Evaporation → condensation → precipitation → run off
 - None of these
27. Take 2 potted plants and label them as I and II. Tie a polythene bag to a leafy branch in each of the two pots. Place pot I in a dark room and pot II in sunlight. After 2 days, observe the polythene bags for the presence of water droplets on them. Which of the following statements regarding the observation is correct?
- Photosynthesis occurs in both plants.
 - Water droplets are present in the polythene bag of pot II
 - Photosynthesis does not occur in both plants.
 - None of these.
28. Take an egg white. Add 2 drops of copper sulphate and 10 drops of caustic soda to it. What will be the given observation?
- It turns violet due to the presence of starch.
 - It turns violet due to the presence of fats.
 - It turns violet due to the presence of proteins.
 - None of these.

29. The joint between the head and upper jaw is an example of
- Hinge joint
 - Fixed joint
 - Pivot joint
 - None of these

30. In human body, assimilation is
- the process by which the digested food carried by the blood is taken in by the cells of the body.
 - the process of breaking large food molecules into simpler molecules.
 - the process by which undigested food is ejected out of the body.
 - None of these.
31. In the diagram which essential part of an electric circuit is missing at position X?



- Wires
 - On / off switch
 - Source of electric current
 - None of these
32. If we spread iron filings on a sheet of paper and place a bar magnet over them, then:
- The iron filings will be attracted uniformly by the magnet
 - More iron filings will be attracted towards the centre of the magnet.
 - More iron filings will be attracted towards the ends of the magnet.
 - None of these
33. Which of these statements is correct?
- If an indicator changes colour with a base, it does not change colour with an acid.
 - Change of colour in an acid and a base depends on the type of the indicator.
 - Both 1 and 2
 - None of these
34. Match the following terms with their definitions given below:
- | | | |
|----------------|---|--|
| I Nutrition | – | A. Organism deriving its food from dead and decaying plants and animals |
| II Parasite | – | B. Association of 2 different organisms in which both are mutually benefited |
| III Saprophyte | – | C. Process of obtaining and utilizing food |
| IV Symbiosis | – | D. Organism that derives its food from the living body of another organism |

- (1) I – B, II – C, III – D, IV – A
- (2) I – C, II – D, III – A, IV – B
- (3) I – D, II – A, III – B, IV – C
- (4) None of these

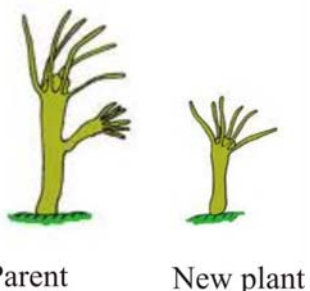
35. Which of the statements given below is false?

- (1) Tooth decay is a slow change.
- (2) Weathering of rocks is an irreversible change.
- (3) Breaking of a clay toy is an irreversible change.
- (4) None of these.

36. Why cold water is poured over the hot metal rim which covers a wooden wheel?

- (1) Because cold water is good for the life of the wheel.
- (2) Because the wooden wheel expands
- (3) Because the rim contracts and fits over the wheel.
- (4) None of these.

37. What kind of reproduction is depicted in the diagram



- (1) Fragmentation (2) Spore formation
- (3) Bud formation (4) None of these

38. Why is electrical wiring usually made from copper?

- (1) Because copper is not magnetic
- (2) Because copper conducts electricity
- (3) Because copper is shiny
- (4) None of these

39. It is said that hydro-electric power stations are advantageous over coal power stations. This is because

- (1) Use of renewable energy sources and pollution free.
- (2) Use of non-renewable energy sources and pollution free
- (3) Cheaper running costs with pollution effects
- (4) None of these

40. During which process carbon dioxide is used by plants for food production?

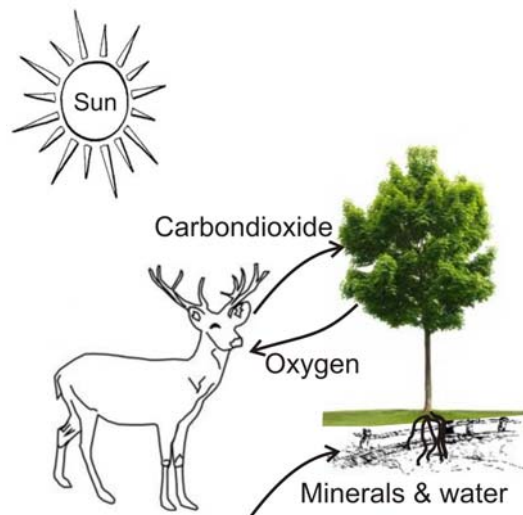
- (1) Photosynthesis (2) Respiration
- (3) Transpiration (4) None of these

INTERACTIVE SECTION

41. Wrapping biodegradable waste in polythene bags will

- (1) Increase the decomposition process
- (2) Decrease the decomposition process
- (3) Have no effect on decomposition process
- (4) None of these

Based on the given diagram answer the questions given below (42 to 43)



42. As the animal exhales carbon dioxide, it gets released into the air and the carbon cycle can begin. This process is known as

- (1) Transpiration (2) Respiration
- (3) Photosynthesis (4) None of these

43. Which are the 2 simple biochemical cycles that can be demonstrated in the above diagram?

- (1) Nitrogen and Oxygen cycle
- (2) Carbon and water cycle
- (3) Oxygen and carbon cycle
- (4) None of these

44. The flow of electric current can be compared to that of a water flow because

- (1) Current flows from higher potential to lower potential.
- (2) Current flows from a highly reactive to a lower reactive metal.
- (3) It flows from higher resistance to lower resistance
- (4) None of these

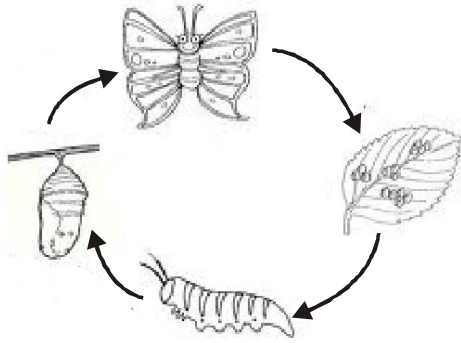
45.



Put a bowl on a table and place a coin at the bottom of the bowl. Keep looking at the coin and move slowly backwards until the coin disappears from view. Now standing in the same place ask another person to pour water in the bowl. We can see the coin again. This is because

- (1) Light is reflected off the coin at exactly the same angle as it enters the eyes.
- (2) Light from the coin is refracted by the water.
- (3) This is because of the rectilinear propagation of light
- (4) None of these.

46.

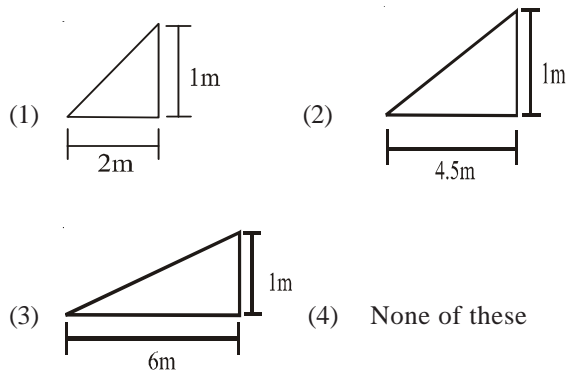


Egg → Caterpillar → Pupa → Butterfly

Which stage of the butterfly is otherwise known as 'Chrysalis' ?

- (1) Egg (2) Larva
(3) Pupa (4) None of these

47. Which of the given inclined planes would be the most efficient to use to move an object upward?



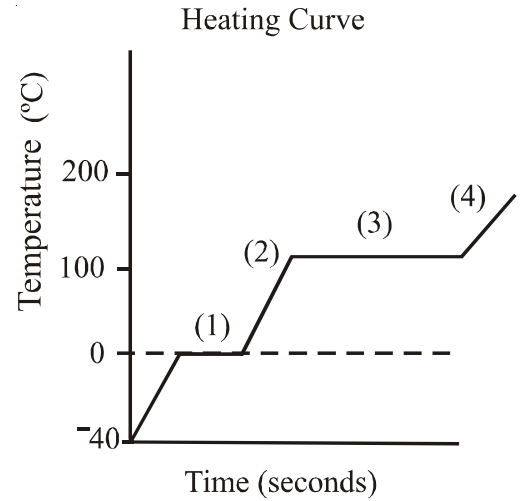
48.

Property	Substance X	Substance Y	Substance Z
State	Solid	Solid	Solid
Dissolves in water	Yes	Yes	No
Attracted to magnet	No	No	Yes
Colour	White	White	Silver
Structure	Each ion is surrounded by six ions of the opposite charge	contains six carbon atoms and an aldehyde group	It has body centered cubic structure

From the above table, identify the substance which could be sugar?

- (1) Substance X (2) Substance Y
(3) Substance Z (4) None of these

49. The graph shows the temperature changes as a sample of ice is heated? What happens during time (1)?



- (1) Ice is melting
(2) Water is freezing
(3) Water is evaporating
(4) None of these

50. Anil and his friend are tracking on a very high hill. As they climb up the hill, they feel more suffocation as

- (1) They had covered a long distance
(2) There are no plants on the hill
(3) There is less percentage of oxygen
(4) None of these



END OF THE EXAM