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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	BIFO BSE INTERNATIONAL FINANCE OLYMPIAD	NIPO NATIONAL IIT-PMT OLYMPIAD
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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 Art, Cricket, Cyber, NIPO 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.

* # See prospectus/website for details

1. You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET (OMR)**.
2. 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.
3. 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
BIOTECHNOLOGY
OLYMPIAD**

N B T O

8
Class

A1
Paper
Code

L E V E L - 1

GENERAL KNOWLEDGE

1. Which one of the following is not a fungus?
(1) Yeast (2) Mushroom
(3) Insulin (4) None of these
2. To produce artificial rains, which chemical is used for cloud seeding?
(1) Copper Sulphate (2) Ammonium Nitrate
(3) Silver Iodide (4) None of these
3. Which among the following is not a mammal?
(1) Bat (2) Shark
(3) Dolphin (4) None of these
4. What is the common name of Indian National tree 'Ficus Benghalensis'?
(1) Neem (2) Peepal
(3) Bargad (Banyan) (4) None of these
5. The significant rise in production of which commodity is referred as "Yellow Revolution"?
(1) Grains (2) Pulses
(3) Oilseeds (4) None of these
6. Which element is necessarily present in all acids?
(1) Carbon (2) Oxygen
(3) Hydrogen (4) None of these
7. What is the name of India's first nuclear reactor?
(1) Apsara (2) Kamini
(3) Dhruva (4) None of these
8. A natural phenomenon that becomes harmful due to pollination is
(1) global warming
(2) ecological balance
(3) green house effect
(4) none of these

9. A rainbow can be seen in the sky
- (1) when the sun is in front of you.
 - (2) when the sun is behind you.
 - (3) when the sun is overhead.
 - (4) none of these
10. The Earth is surrounded by an insulating blanket of gases which protects it from the light and heat of the sun. This insulating layer is called the
- (1) Lithosphere
 - (2) Biosphere
 - (3) Atmosphere
 - (4) None of these

LIFE SCIENCE

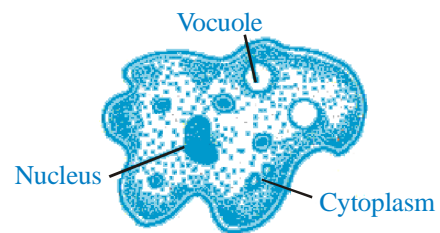
11. Before sowing the seeds, it is necessary to break soil to the size of grains to get better yield. The main tools used for such are
- (1) Tractor, hoe, seed drill
 - (2) Bullock, tiller, tractor
 - (3) Plough, hoe, cultivator
 - (4) None of these
12. Deliberately injecting weak microbes into a healthy body and producing antibodies to fight against strong microbes is called
- (1) Medication
 - (2) Antibiotics
 - (3) Vaccination
 - (4) None of these
13. Which process is shown in the following picture?



- (1) Sieving
 - (2) Threshing
 - (3) Winnowing
 - (4) None of these
14. Which of the following reproduces only inside a host cell?
- (1) Bacteria
 - (2) Virus

- (3) Amoeba
- (4) None of these

15. Which gas is obtained during the processing of coal?
- (1) Carbon dioxide
 - (2) Coal gas
 - (3) Sulphur dioxide
 - (4) None of these
16. The 4R Principle is
- (1) Reduce, Reuse, Recycle, Recover
 - (2) Remember, Reduce, Recycle, Rejoice
 - (3) Repeat, Rejoice, Recycle, Reduce
 - (4) None of these
17. Animals whose numbers are dwindling to a level that they might face extinction are
- (1) Reducing species
 - (2) Extinction species
 - (3) Endangered species
 - (4) None of these
18. If we uncover half of the forest, covering of the earth, what crisis will be produced at most and at first?
- (1) Some species will be extincted
 - (2) Population and ecological imbalance will rise up
 - (3) Energy crisis will occur
 - (4) None of these
19. In this diagram of a single-celled organism, which organelle functions as a place to store extra water?



- (1) Cytoplasm
 - (2) Nucleus
 - (3) Vacuole
 - (4) None of these
20. Which layer contains petroleum oil & gas?
- (1) Above that of water
 - (2) Below water
 - (3) Between water and sand
 - (4) None of these

31. Science deals with criminal investigation is _____ .

- (1) Criminal Science
- (2) Forensic Science
- (3) Gene Science
- (4) None of these

32. Agar Agar powder is obtained from _____ .

- (1) Marine BGA
- (2) Fungus
- (3) Red Algae
- (4) None of these

33. How many hearts does a cockroach have?

- (1) Single heart with 4 chambers
- (2) Single heart with 3 chamber
- (3) Single heart with 13 chambers
- (4) None of these

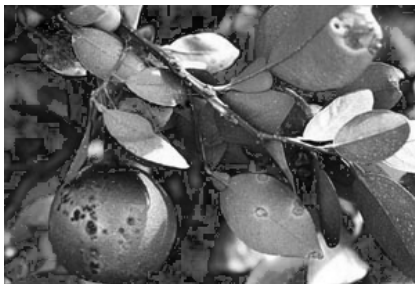
34. Which sea animal sleeps with one eye open?

- (1) Whale
- (2) Shark
- (3) Dolphin
- (4) None of these

35. Which leaves are used by farmers to protect their crops from weeds and insects?

- (1) Peepal leaves (2) Basil leaves
- (3) Neem leaves (4) None of these

36.



This plant disease citrus canker is caused by

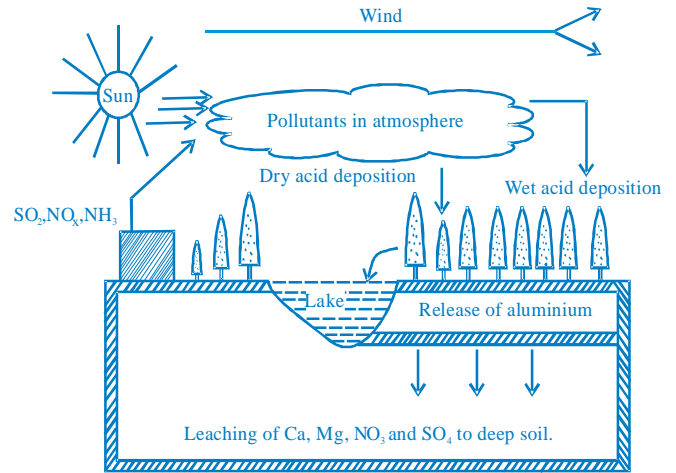
- (1) Virus (2) Fungi
- (3) Bacteria (4) None of these

37. Which of the following represents the correct match for items in column A with those in column B.

Column A	Column B
(a) Nylon	(i) Thermoplastic
(b) PVC	(ii) Thermosetting plastic
(c) Bakelite	(iii) Fibre

- (1) a-(ii), b-(iii), c-(i)
- (2) a-(iii), b-(i), c-(ii)
- (3) a-(ii), b-(i), c-(iii)
- (4) None of these

38. Which phenomenon is shown in the figure?

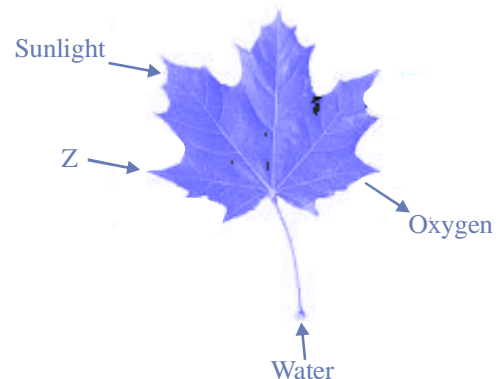


- (1) Evaporation
- (2) Acid rain
- (3) Water pollution
- (4) None of these

39. Which of the following is function of cilia and flagella?

- (1) Locomotion
- (2) Body's defence
- (3) Both (1) and (2)
- (4) None of these

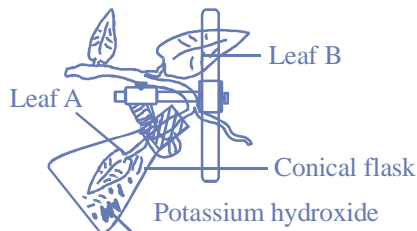
40. In the diagram, the label Z represents-



- (1) Carbon dioxide
- (2) Nitrogen
- (3) Water vapour
- (4) None of these

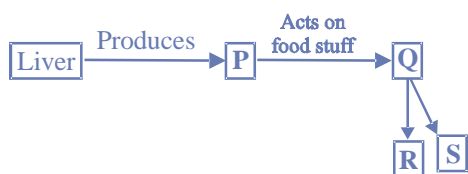
INTERACTIVE SECTION

41. A destarched potted plant is taken. One leaf of this plant (labelled as A) is inserted into conical flask containing potassium hydroxide as shown in the given experimental set-up.



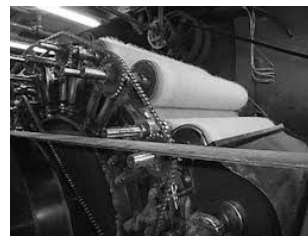
This apparatus is then kept in sunlight for 5-6 hours. Afterwards, leaf A and leaf B are plucked from the plant and tested for the presence of starch by carrying out iodine test. Which of the following statements is correct regarding the given experiment?

- (1) Leaf A does not turn blue-black indicating the absence of starch.
 - (2) Leaf A could not carry out photosynthesis due to unavailability of CO_2 .
 - (3) Leaf B does not turn blue-black as the plant was destarched.
 - (4) Both (1) and (2)
42. Study the flow chart given below.



Select the correct option for P, Q, R and S.

- | P | Q | R | S |
|---------------------|----------|-------------|----------|
| (1) Digestive Juice | Proteins | Fatty acids | Glycerol |
| (2) Bile | Fats | Fatty acids | Glycerol |
| (3) Bile | Proteins | Amino | Peptides |
| (4) None of these | | | |
43. Select the correct statement regarding the process shown in given figure with respect to wool production.

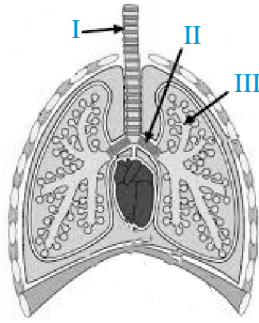


- (1) The figure shows the process of scouring.
 - (2) The given process results into the formation of yarn.
 - (3) The figure shows a carding machine that results into the formation of narrow untwisted fibres.
 - (4) None of these
44. Identify the animal which is not found in tropical rainforests?



- (4) None of these

45. Given figure illustrates the internal structure of lungs.



The exchange of gases takes place at which labelled structure?

- (1) I
- (2) II
- (3) III
- (4) None of these

46. The given figure represents

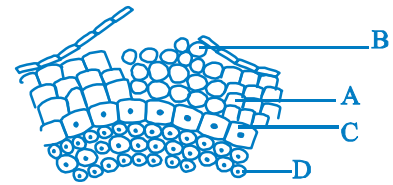


- (1) RBCs
- (2) WBCs
- (3) Platelets
- (4) None of these

47. Which of the following statements does not represent functions of the roots in a plant?

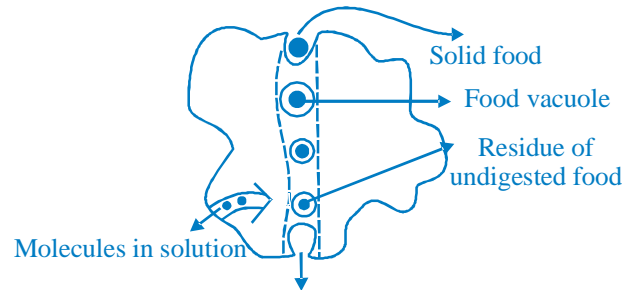
- (1) Absorption of water and minerals from the soil
- (2) To anchor the plant in the ground
- (3) To take in carbon dioxide and release oxygen during photosynthesis
- (4) None of these

48. In the diagram of lenticel identify the parts as A, B, C, D.



- (1) A – phellem, B – periderm, C – phellogen, D – phelloderm
- (2) A – phellem, B – complementary cells, C – phelloderm, D – periderm
- (3) A – complementary cells, B – phellogen, C – phelloderm, D – periderm
- (4) None of these

49. In the diagram, which of the following processes are shown in *Amoeba*?



- (1) exocytosis
- (2) phagocytosis
- (3) pinocytosis
- (4) none of these

50. Johnny placed a breath mint and a lump of toothpaste in a cup of water and let it sit overnight. Which statement best explains why the breath mint was gone the following morning, but the toothpaste was still at the bottom of the cup?

- (1) The breath mint was less soluble than the toothpaste.
- (2) The breath mint was more soluble than the toothpaste.
- (3) The breath mint has a lower density than the toothpaste.
- (4) None of these



END OF THE EXAM