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<b>ICO</b> INTERNATIONAL CYBER OLYMPIAD	<b>NISO</b> NATIONAL INTERACTIVE SCIENCE OLYMPIAD	<b>NIMO</b> NATIONAL INTERACTIVE MATHS OLYMPIAD	<b>NBTO</b> NATIONAL BIOTECHNOLOGY OLYMPIAD	<b>IEO</b> INTERNATIONAL ENGLISH OLYMPIAD	<b>IGO</b> INTERNATIONAL G.K. OLYMPIAD	<b>BIFO</b> BSE INTERNATIONAL FINANCE OLYMPIAD
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**NATIONAL  
BIOTECHNOLOGY  
OLYMPIAD**

**N B T O**

**7**  
Class **A1**  
Paper  
Code

**L E V E L - 1**

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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 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.

1. 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.
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 except for classes 1 and 2.

## GENERAL KNOWLEDGE

1. The study of interactions between organisms and their environment is called
  - (1) Habitat
  - (2) Food web
  - (3) Ecology
  - (4) None of these
2. Which of the following is an example for marine life zone?
  - (1) Coral reef
  - (2) Lake
  - (3) Well
  - (4) None of these
3. Which gas accounts for more than 60% of the enhanced green house effect caused by the increase of green house gases?
  - (1) Nitrogen
  - (2) Sulphur dioxide
  - (3) Carbon dioxide
  - (4) None of these
4. Which of the following is an example for an extinct specie ?
  - (1) Dodo
  - (2) Siberian tiger
  - (3) Red Kangaroo
  - (4) None of these
5. A book which contains lists of species whose continued existence is threatened
  - (1) Green data book
  - (2) Red data book
  - (3) Yellow data
  - (4) None of these
6. Which of the following is an example for a natural cause of air pollution?
  - (1) Urbanization
  - (2) Deforestation
  - (3) Dust storm
  - (4) None of these
7. Monuments, buildings and statues are damaged due to the corrosion caused by
  - (1) Acid rain
  - (2) Ozone depletion
  - (3) Radioactivity
  - (4) None of these

8. World Environment Day is celebrated on  
 (1) 23 September (2) 5 June  
 (3) 6 April (4) None of these
9. Which is the major source for thermal pollution?  
 (1) Fossil fuel  
 (2) Radioactive wastes  
 (3) Urbanization  
 (4) None of these
10. Which house hold material is considered as a hazardous waste?  
 (1) Glass (2) Spoiled food  
 (3) Batteries (4) None of these

### LIFE SCIENCE

11. Which of the following leaves can be used in salad?  
 (1) Carrot (2) Cabbage  
 (3) Brinjal (4) None of these
12. Which of the following is a carbohydrate?  
 (1) Starch (2) Calcium  
 (3) Vitamin A (4) None of these
13. Vitamin D is essential for the body as it prevents  
 (1) Anaemia (2) Scurvy  
 (3) Rickets (4) None of these
14. The process by which jute fibre is obtained from the bark of jute plant is called  
 (1) Retting (2) Spinning  
 (3) Ginning (4) None of these
15. Which of the following is an example for xerophytes?  
 (1) Cactus (2) Lotus  
 (3) Sunflower (4) None of these
16. 70% of our blood consists of  
 (1) Proteins (2) Water  
 (3) Fats (4) None of these
17. Changes in our surroundings that makes us respond to them are called  
 (1) Evolution (2) Acclimatization  
 (3) Stimuli (4) None of these
18. Which gas dissolves in rain water to form acid rain?  
 (1) Sulphur dioxide (2) Carbon monoxide

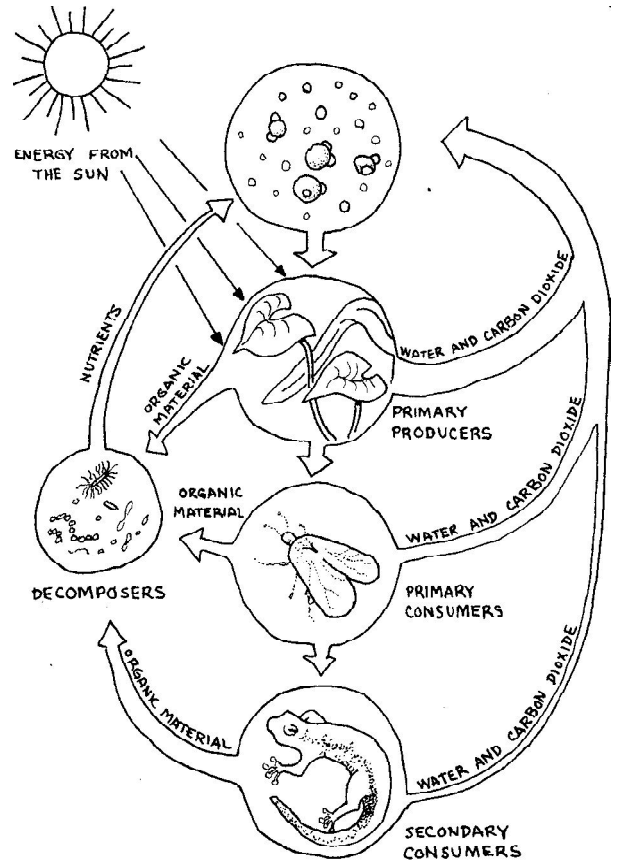
- (3) Carbon dioxide (4) None of these
19. Undesirable and unused materials are  
 (1) Garbage (2) Sewage  
 (3) Chemical (4) None of these
20. Which of the following plant has a fibrous root system?  
 (1) Banyan tree (2) Wheat plant  
 (3) Water melon (4) None of these
21. A substance which cannot be recycled by micro organisms is  
 (1) Wood (2) Clothes  
 (3) Plastic (4) None of these
22. Which gas is used for making fertilizers?  
 (1) Oxygen (2) Nitrogen  
 (3) Carbon dioxide (4) None of these
23. Oral Rehydration Salt solution is beneficial for anybody who has  
 (1) Fever (2) Malaria  
 (3) Diarrhoea (4) None of these
24. Image is formed on which part of the eye?  
 (1) Iris (2) Retina  
 (3) Cornea (4) None of these
25. Most of the pure drinkable water of the earth is in the form of  
 (1) Icebergs (2) Springs  
 (3) Ocean water (4) None of these
26. A process that converts carbon dioxide into organic compounds using sunlight is called  
 (1) Carbonation (2) Burning  
 (3) Combustion (4) None of these
27. Which of the following countries is closest to the equator?  
 (1) Greenland (2) Australia  
 (3) Sri Lanka (4) China
28. Anaerobic respiration induced by micro-organisms. Name the process.  
 (1) Fermentation (2) Combustion  
 (3) Fragmentation (4) Nutrition

29. The thinnest layer of the earth is  
 (1) Crust (2) Landmass  
 (3) Core (4) Mantle
30. Who was the first women to go to space?  
 (1) Sunita Chawla (2) Valentina Tereshkova  
 (3) Kalpana Chawla (4) Sunita Williams
31. What is the chemical used in Starch test?  
 (1) Copper sulphate (2) Caustic soda  
 (3) Iodine (4) Acid
32. Which is the smallest bone in our body?  
 (1) Femur (2) Stirrup  
 (3) Spinal cord (4) Elbow
33. Which of the protein is commercially extracted from tomato?  
 (1) Lycopene (2) Insulin  
 (3) Papain (4) Ligase
34. Which protein of papaya is important for leather industry?  
 (1) Bromelain (2) Insulin  
 (3) Papain (4) Ligase
35. Which enzyme can be used to detect E.coli in milk?  
 (1) Bromelain (2) Insulin  
 (3) Papain (4) Galactosidase
36. Method of seperating seeds of paddy from its stalks is called \_\_\_\_\_  
 (1) Threshing (2) Churning  
 (3) Decantation (4) Sediment
37. Grain and husk can be seperated with the process of decantation  
 (1) False (2) True  
 (3) Can't say (4) None of these
38. Fish have shaped body that help them to move inside water  
 (1) Streamline (2) Spiky  
 (3) Helix (4) Round
39. The part of a banana plant not used as food is  
 (1) Flower (2) Fruit  
 (3) Stem (4) Root

40. Which part of the plant gets carbon dioxide from the air for photosynthesis?  
 (1) Root hair (2) Stomata  
 (3) Leaf veins (4) Sepal

### ETG INTERACTIVE SECTION

41.



The above diagram illustrates the nutrition process of

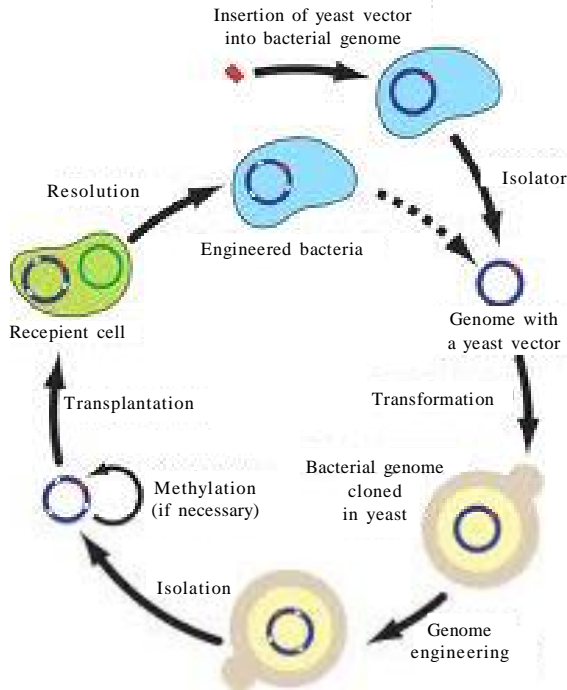
- (1) Fungi (2) Insects  
 (3) Rabbit (4) None of these
42. The type of molecule represented below is found in some organisms,



Which statement correctly describes the sequence of bases found in this type of molecule?

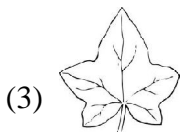
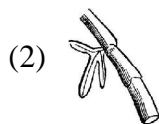
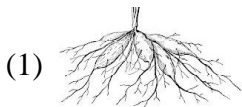
- (1) It changes every time it multiplies  
 (2) It determines the characteristics that will be inherited.  
 (3) It is exactly the same in all organisms  
 (4) None of these

43.



The above diagram shows which technique in Biotechnology?

- (1) Tissue culture                      (2) Cloning  
 (3) Genetic engineering              (4) None of these
44. A biologist reported success in breeding a tiger with a lion, producing healthy offspring. Other biologists will accept this report as a fact only if
- (1) Other researchers can replicate the experiment  
 (2) The offspring are given a scientific name  
 (3) The biologist included a control on the experiment  
 (4) None of these
45. Vegetative propagation in sugarcane occurs by



(4) None of these

46. Bioremediation is the process of cleaning oil spills or other pollutants from soil, water and wastewater using living organisms like bacteria or plants.

Which statement does not represent an example of bioremediation?

- (1) Duckweed removes heavy metals from ponds and lakes.  
 (2) Ladybug eliminates insect pests from plants.  
 (3) Ragweed plants remove lead from the ground around factory sites.  
 (4) None of these
47. The normal blood pressure of a healthy person is
- (1) 140/90                                  (2) 120/80  
 (3) 140/80                                  (4) None of these

48.



In the above flower, pollination occurs with the help of

- (1) Birds  
 (2) Wind  
 (3) Water  
 (4) None of these
49. Which type of nutrition is found in Amoeba?
- (1) Saprophytic nutrition  
 (2) Halophytic nutrition  
 (3) Holozoic  
 (4) None of these

50. A new variety of tomato that ripens slowly was developed by a laboratory technique which does not involve methods of natural reproduction. It also contains a section of a DNA molecule not found in the tomato from which it was originally developed. The technique used to develop this variety of tomato is .

- (1) Cross-pollination    (2) Genetic engineering  
 (3) Budding                      (4) None of these



END OF THE EXAM