



# EDUHEAL FOUNDATION



## INTERACTIVE OLYMPIADS

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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
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**NATIONAL  
BIOTECHNOLOGY  
OLYMPIAD**

**N B T O**

**7**  
Class

**A1**  
Paper  
Code

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Creating  
**SUCCESS**  
Stories

A Unit of EDUSYS LEARNING MEDIA

AIEEE • IIT • PMT • OLYMPIADS

### IMPORTANT INFORMATION

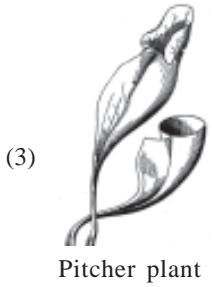
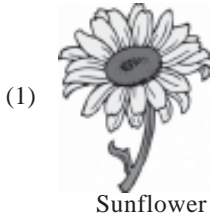
1. You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET**.
2. The question paper is made as per syllabus guidelines & pattern given in the information Booklet. The Question Paper for Classes 1 to 6 contains 25 Questions each to be answered in 40 minutes. The Question 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 coordinator 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.

### GENERAL KNOWLEDGE

1. Deforestation would most immediately result in
  - (1) The disappearance of native species
  - (2) Industrialization of an area
  - (3) The depletion of the ozone shield
  - (4) None of these
2. "Coal, petroleum and natural gas are in exhaustible natural resources."  
The statement is
  - (1) True
  - (2) Can't say
  - (3) False
  - (4) None of these
3. The ozone layer of the atmosphere is damaged by
  - (1) Chloroflourocarbon from cooling system
  - (2) Deforestation
  - (3) Ultra violet rays from the sun
  - (4) None of these
4. Does global warming mean that every place on earth is getting warmer?
  - (1) No, just summers are warmer
  - (2) But world average is rising
  - (3) Yes, every spot on Earth is hotter
  - (4) None of these
5. Which of the following is not a major greenhouse gas?
  - (1) Calcium carbonate
  - (2) Methane
  - (3) Water vapour
  - (4) None of these
6. Why spring water is considered digestive and good for health?
  - (1) Because it is obtained from mountains
  - (2) Because it contains salts and minerals
  - (3) Because it doesnot contain salts and minerals
  - (4) None of these
7. The process of repairing environmental damage to a site is termed.
  - (1) Remediation
  - (2) Repairation
  - (3) Recycling
  - (4) None of these
8. What recyclable commodity is not valuable?
  - (1) Paper
  - (2) Aluminium
  - (3) Glass
  - (4) None of these
9. What is the term used to describe a substance that can be broken down and can be eaten up by micro-organisms like bacteria?
  - (1) Recycled
  - (2) Environment friendly
  - (3) Biodegradable
  - (4) None of these
10. What ways can you help save our earth?
  - (1) Re-use your plastic bottles and bags
  - (2) Reduce the amount of waste you produce
  - (3) Plant a tree
  - (4) All of the above

## LIFE SCIENCE

11. The plant which capture insect is \_\_\_\_\_ ?



(4) None of these

12. We are taken in by the roots of a plant. We are \_\_\_\_\_?

- (1) Sunlight                      (2) Minerals, water  
(3) Carbondioxide              (4) None of these

13. Plant growing in hilly areas have

- (1) No leaves                      (2) Needle like leaves  
(3) Broad leaves                  (4) None of these

14. The nucleus surrounded by a jelly like substance in a cell is called

- (1) cell membrane              (2) Protoplasm  
(3) Cytoplasm                      (4) None of these

15. Two different organisms living together and benefitting each other are known as

- (1) Symbiotic                      (2) Saprophytic  
(3) Parasitic                        (4) None of these

16. Science that is being used more and more often by police services around the world to catch criminals

- (1) Genomic science              (2) Forensic science  
(3) Geologic science              (4) None of these

17. What type of energy does the windmill use to do work?



- (1) Mechanical                      (2) Electrical  
(3) Nuclear                          (4) Chemical

18. This is a picture of which plant



- (1) Cinchona                      (2) Barbadoes Cotton  
(3) Clove Tree                      (4) None of these

19. Mosquito belongs to phylum

- (1) Arthropoda                      (2) Annelids  
(3) Nematoda                        (4) None of these

20. The picture below shows the Sun shining on an open jar with some water in it.



Jatin put the jar of water on a table outside in the sunlight. Which of the following pictures shows what Jatin would observe after all of the water had turned into a gas?



(4) None of these

21. Quinine is obtained from the bark of which tree?

- (1) Red wood                      (2) Cinchona  
(3) Eucalyptus                      (4) None of these

22. Plant need water, carbondioxide and sunlight to make their own food. The waste from this process is

- (1) Nitrogen                        (2) Oxygen  
(3) Neon                              (4) None of these

23. Aerobic respiration takes place in the

- (1) Absence of Oxygen              (2) Presence of Carbon dioxide  
(3) Presence of Oxygen              (4) None of these

24. The plant which used to make biodiesel is

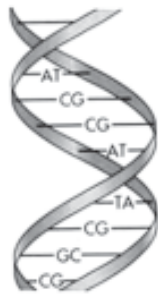
- (1) Rose                              (2) Jatropha  
(3) Coconut                        (4) None of these

25. This is picture of



- (1) Human chromosomes (2) Plant cell  
 (3) DNA (4) None of these

26. DNA is a

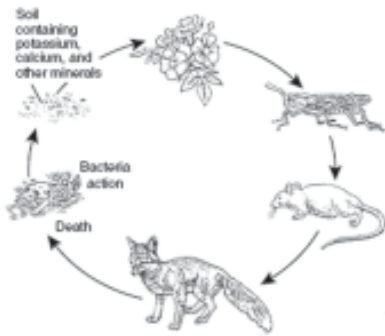


- (1) Double helix (2) Single helix  
 (3) Thrice (4) None of these

27. How many chromosome does human have?

- (1) 22 chromosome (2) 104 chromosome  
 (3) 46 chromosome (4) None of these

28. Which concept is best illustrated by this diagram?



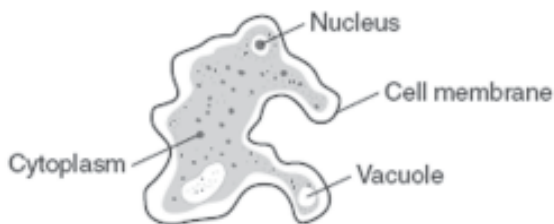
- (1) The effect of limiting factors in a biome  
 (2) Cycling of nutrients in a community  
 (3) The exchange of CO<sub>2</sub> and O<sub>2</sub> in an ecosystem  
 (4) None of these

29. Genetic engineering techniques have been used to selectively move genes between living organisms:

- (1) for about 5,000 years  
 (2) for about 100 years  
 (3) for about 25 years  
 (4) none of these

30. In this diagram of a single-celled organism, which organelle functions as a place to store extra water?

**Single-Celled Organism**



- (1) Cytoplasm (2) Nucleus  
 (3) Vacuole (4) None of these

31. Biotechnology can be a powerful tool for environmental management. Research is being done to use micro-organisms

- (1) To reverse the effect of global warming.  
 (2) Healing of ozone hole.  
 (3) Clean oil pollution in water.  
 (4) None of these.

32. What are the three R's which are used to help in preservation of environment?

- (1) Reduce, Refuse, Recycle  
 (2) Reduce, Reuse, Recycle  
 (3) Retain, Reduce, Recycle  
 (4) None of these

33. Keep a plant inside your house in dark for two-three days. It becomes weak and begin to wilt because.....

- (1) It does not get sunlight and water  
 (2) It does not get nutrients  
 (3) both (1) and (2)  
 (4) None of these

34. This is a leaf of



- (1) Lotus (2) Cactus  
 (3) Bryophyllum (4) None of these

35. Mature ovary forms the

- (1) Seed (2) Fruit  
 (3) Pistil (4) None of these

36. A spore producing plant is

- (1) Rose (2) bread mould  
 (3) Potato (4) None of these

37. The process of fusion of the male and female gametes is called

- (1) Fertilisation (2) Pollination  
 (3) Reproduction (4) None of these

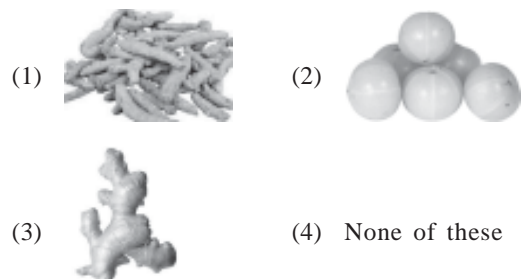
38. The rainwater can be used to recharge the ground water this is referred to as

- (1) Water harvesting (2) Drip irrigation  
 (3) bawris (4) None of these

39. Which of the following **best** describes the role of mushrooms in ecosystems?

- (1) Capturing energy from sunlight  
 (2) Breaking down dead plant material  
 (3) Taking energy from animal hosts  
 (4) None of these

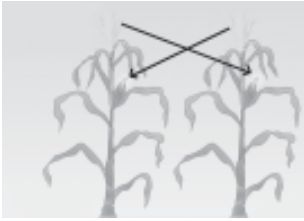
40. Which of the following is used as antiseptic?



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

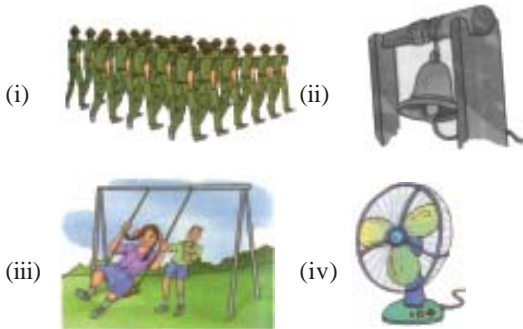
## ETG INTERACTIVE SECTION

41. This picture illustrate the process of



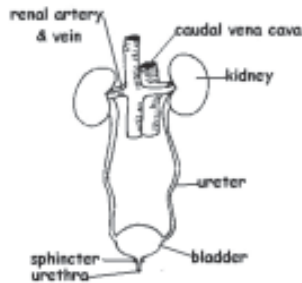
- (1) Fertilization (2) Cross Pollination  
(3) Embryogenesis (4) None of these

42. Which of the following figure shows periodic motion?



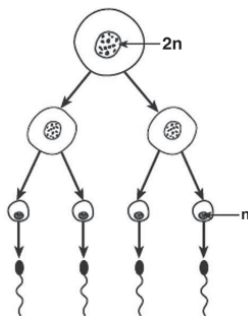
- (1) (iii), (iv) (2) (ii), (iii)  
(3) (i), (ii), (iii) (4) All of these.

43. The picture illustrates \_\_\_\_\_?



- (1) Digestive system (2) Reproductive system  
(3) Excretory system (4) None of these

Base your answers to questions 44 through 46 on the diagram below, which represents a necessary part of human reproduction.



44. This diagram represents the process of  
(1) Ovulation (2) Gametogenesis  
(3) Gastrulation (4) None of these

45. In humans, this process is most influenced by the presence of

- (1) Egg cells (2) Thyroxin  
(3) Testosterone (4) None of these

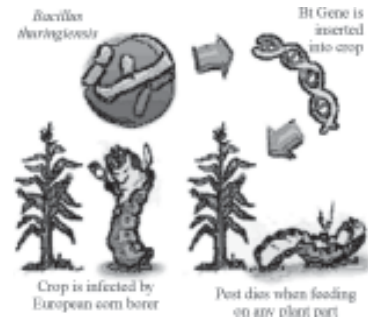
46. This process occurs within the

- (1) Corpus luteum (2) Testes  
(3) Ovaries (4) None of these

47. The hormone which does not cause growth in plants is

- (1) auxin (2) gibberellin  
(3) ethylene (4) None of these

48.



What the above given figure illustrate?

- (1) Sexual reproduction.  
(2) Production of pest resistance crop.  
(3) Production of high yielding variety of the crop.  
(4) None of these.

Direction : See the diagram drawn below and answer the questions (Q. 49. Q. 50)



49. This type of vegetative reproduction is found in:

- (1) Mango (2) Some species of grass  
(3) Strawberry (4) Both (1) and (3)

50. Which type of vegetative reproduction is shown in diagram?

- (1) Vegetative reproduction by leave.  
(2) Vegetative reproduction by stem.  
(3) Vegetative reproduction by root.  
(4) None of these



**END OF THE EXAM**