



# EHF

LEARNING FOR LIFE

## EDUHEAL FOUNDATION

# CLASS 10

## LEVEL - 1

## Set A1

### EHF OLYMPIADS

- 4000 schools • 6 lakh students
- 10 olympiads • Global outreach



### EHF

## NATIONAL BIOTECHNOLOGY OLYMPIAD

Name : .....

Roll No : .....

Class : .....

School : .....



### NATIONAL BIOTECHNOLOGY OLYMPIAD



### NATIONAL MATHS OLYMPIAD



### NATIONAL SCIENCE OLYMPIAD



### INTERNATIONAL CYBER OLYMPIAD



### INTERNATIONAL ENGLISH OLYMPIAD



### INTERNATIONAL GENERAL KNOWLEDGE OLYMPIAD



### BSE international finance olympiad (BIFO)



### NATIONAL IIT-PMT OLYMPIAD (NIPO)

**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 and Cricket.

**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

#### Instructions for the Candidate

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.

WEBSITE : [WWW.EDUHEALFOUNDATION.ORG](http://WWW.EDUHEALFOUNDATION.ORG)  
E-MAIL : [INFO@EDUHEALFOUNDATION.ORG](mailto:INFO@EDUHEALFOUNDATION.ORG)




# ROUGH WORK

# GENERAL KNOWLEDGE

- The hard outer covering of a tooth is called
  - dentine
  - enamel
  - dental plaque
  - none of these
- The expansion of an artery each time the blood is forced into it, is called
  - blood pressure
  - heart beat
  - pulse
  - none of these
- In all mammals, including humans, a single organ, the heart, pumps and circulates blood throughout its body. How many blood-pumping organs does a worm have?
  - 2 pairs
  - 3 pairs
  - 5 pairs
  - None of these
- From which annelids is the anticoagulant hirudin extracted?
  - Salamander
  - Leech
  - Spider
  - None of these
- Butterflies and moths mainly feed on nectar and other sweet juices. What do they use to suck these up?
  - Antennae
  - Proboscis
  - Tarsi
  - None of these
- How does the adult Tiger Beetle locate its prey?
  - Through sight
  - Through sound
  - Through sonar waves
  - None of these
- Which of these features is shared by moths and butterflies?
  - Shape and structure of the antennae
  - Nature of the cocoon or pupae
  - Number of wings
  - None of these
- Chikungunya, meaning, 'illness of the bended walker', is a viral disease that is transmitted to humans by which mosquito?
  - Anopheles*
  - Culex*
  - Aedes*
  - None of these
- Which device is used to measure the depth of seas and oceans?
  - Gravometer
  - Fathometer
  - Gyroscope
  - None of these
- Which genetic engineering targets the genes in eggs, sperm, or very early embryos?
  - Germline
  - Somatic
  - Both (1) and (2)
  - None of these



# LIFE SCIENCE

- Jersey and Brown Swiss are
  - Exotic breeds of cattle having short lactation periods
  - Desi (Local) breeds of cattle having longer lactation periods
  - Exotic breeds of cattle having longer lactation periods
  - None of these
- Bos taurus* is the scientific name of
  - 
  - 
  - 
  - none of these
- Sleeping sickness is caused by
  - Leishmania*
  - Trypanosoma*
  - Ascaris*
  - None of these
- \_\_\_\_\_ are pollution indicator plants.
  - Mycorrhiza
  - Lichen
  - Rose
  - None of these

15. Example of Thallophyta is

(1)



Algae

(2)



Mosses

(3)



Ferns

(4) None of these

16. Which of the following is not correctly matched?

(1) Calcium - Ca

(2) Silver - Ag

(3) Copper - Co

(4) None of these

17. Which of the following statements is true concerning human blood?

(1) The blood of all normal humans contain red and white cells, platelets, and plasma.

(2) Proteins are not normal components of human blood.

(3) Both (1) and (2)

(4) None of these

18. Hydra belongs to the phylum

(1) Arthropoda

(2) Coelenterata

(3) Echinodermata

(4) None of these



19. Genetic change occurs naturally through a process known as

(1) natural selection

(2) mutations

(3) both (1) and (2)

(4) none of these

20. Which type of tissue forms glands?

(1) Epithelial

(2) Connective

(3) Nervous

(4) None of these

21. Which of the following plant tissues are dead?

(1) Apical Meristem and Parenchyma

(2) Aerenchyma and Collenchyma

(3) Sclereids and Tracheids

(4) None of these

22. In air passageway, trachea leads to two smaller tubes called

(1) pharynx ducts

(2) alveolar ducts

(3) bronchi

(4) none of these

23. In which of the following cases of motions, the distance moved and the magnitude of displacement are equal?

(1) If the car is moving on straight road

(2) If the car is moving in circular path

(3) The pendulum is moving to and fro

(4) None of these

24. Hammer, Anvil and Stirrup are three bones of

(1) outer ear

(2) middle ear

(3) inner ear

(4) none of these

25. Match structures given in Column I with functions given in Column II:

**Column I**

**Column II**

(i) Stomata

(a) Absorption of water

(ii) Xylem

(b) Transpiration

(iii) Root hairs

(c) Transport of food

(iv) Phloem

(d) Transport of water

(1) (i)-(d), (ii)-(a), (iii)-(b), (iv)-(c)

(2) (i)-(c), (ii)-(b), (iii)-(a), (iv)-(d)

(3) (i)-(b), (ii)-(d), (iii)-(a), (iv)-(c)

(4) None of these

26. In printed scientific names, only the \_\_\_\_\_ is capitalized.

(1) family

(2) class

(3) genus

(4) none of these

27. Ricin (Protein Toxin) is extracted from
- (1) Castor beans plants
  - (2) Amla
  - (3) Brahmi
  - (4) None of these
28. In a lake polluted with pesticides, which one of the following will contain the maximum amount of pesticides?
- (1) Microscopic animals
  - (2) Big fish
  - (3) Water birds
  - (4) None of these
29. Which antiviral protein is secreted by our body in case of viral infection?
- (1) Varicella
  - (2) Interferon
  - (3) Both (1) and (2)
  - (4) None of these
30. Cells are focused in microscope under
- (1) 40X
  - (2) 100X
  - (3) 10X
  - (4) None of these
31. Which is a Chronic disease?
- (1) Cough
  - (2) Common Cold
  - (3) Elephantiasis
  - (4) None of these
32. Which one of the following crops would require a minimum quantity of NPK or urea for its proper growth?
- (1) Cabbage
  - (2) Sugarcane
  - (3) Soyabean
  - (4) None of these
33. Which of the following is a vertebrate organism?
- |                 |                   |
|-----------------|-------------------|
| (1) Cuttle fish | (2) Cray fish     |
| (3) Globe fish  | (4) None of these |



34. The first test tube baby born was
- (1) Louise Brown
  - (2) Robert Brown
  - (3) Alec Jeffries
  - (4) None of these
35. Glucose is reabsorbed in the kidney mainly by
- (1) Bowman's capsule
  - (2) Loop of Henle
  - (3) Proximal Convoluted Tubule
  - (4) None of these
36. Which of the following is a homogenous mixture?
- (1) Water + Oil
  - (2) Mercury in amalgamated zinc
  - (3) Chalk in water
  - (4) None of these
37. Vinegar production consists of
- (1) anaerobic fermentation
  - (2) aerobic fermentation followed by anaerobic fermentation
  - (3) anaerobic fermentation followed by aerobic fermentation
  - (4) none of these
38. Which of the following is used for dissolution of gold?
- (1) Sulphuric acid
  - (2) Nitric acid
  - (3) Aqua regia
  - (4) None of these
39. Which of the following reacts with bromine water?
- (1) Unsaturated hydrocarbons
  - (2) Saturated hydrocarbons
  - (3) Both (1) and (2)
  - (4) None of these
40. Excretion of bile pigments in urine indicates
- (1) gout
  - (2) jaundice
  - (3) diabetes
  - (4) none of these

# INTERACTIVE SECTION

41. Equal volumes of hydrochloric acid and sodium hydroxide solutions of same concentration are mixed and the pH of the resulting solution is checked with a pH paper. What would be the colour obtained?

- (1) Red
- (2) Yellow
- (3) Yellowish green
- (4) None of these

42. Seema visited a Natural Gas Compressing Unit and found that the gas can be liquefied under specific conditions of temperature and pressure. While sharing her experience with friends she got confused. Help her to identify the correct set of conditions.

- (1) High temperature, low pressure
- (2) Low temperature, high pressure
- (3) High temperature, high pressure
- (4) None of these

43. To prepare stained temporary mount of onion peel, \_\_\_\_\_ solution is required.

- (1) Safranin solution
- (2) Methylene blue
- (3) Both (1) and (2)
- (4) None of these

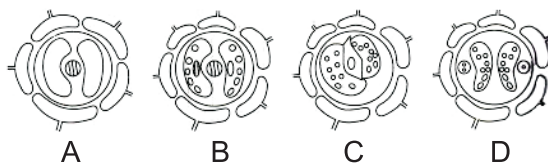
44. Organelles discovered by Christian Rene that are bounded by single-membrane are called

- (1) Centrioles
- (2) Golgi vesicles
- (3) Ribosomes
- (4) None of these

45. Arun, Deepa, Uma were asked to select a plant material which would not give blue black colour with iodine solution. Who did not select the right material?

- (1) Arun selected potato
- (2) Deepa selected rice
- (3) Uma selected apple
- (4) None of these

46. Students observed the epidermal peel of a leaf under the high power of a microscope. The following are the sketches made by them.



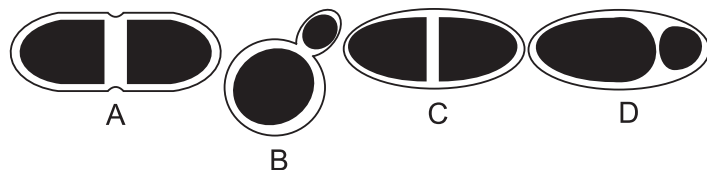
The correct sketch is

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

47. A student dissolved 1 g of sugar in 10 mL of distilled water in a beaker A. He dissolved 10 g of sugar in 100 mL of distilled water in beaker B. Then he dropped a few raisins, in each. After two hours he found the raisins

- (1) swollen in A and shrunken in B.
- (2) shrunken in A and swollen in B.
- (3) swollen in both.
- (4) none of these

48. The budding in yeast is illustrated by the diagram:



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

49. During the experiment of photosynthesis, leaf is boiled in which of these liquids?

- (1) Water
- (2) Alcohol
- (3) Iodine
- (4) None of these

50. The hybrid embryo can be rescued from damage/ collapse by growing it

- (1) at low pH
- (2) at low water activity
- (3) in artificial medium
- (4) none of these



**END OF THE EXAM**