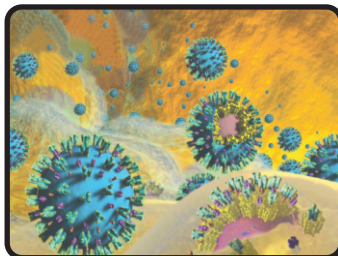


EtG

OLYMPIAD EXPLORER BIOTECHNOLOGY

EduHeal Foundation
Nationwide Biotechnology Olympiad
and other
National/International Biotechnology Olympiads/Talent Search Exams.



Class-3

EtG **BOOKS**

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(For additional science topics the child can also refer to science work books)

SYLLABUS GUIDELINES

CLASS - III

Based on CBSE, ICSE & GCSE Syllabus & NCF guidelines devised by NCERT

1. Family and Friends

1.1 RELATIONSHIPS

My family

Who all live with you at home? How are they related to each other? Do you have relatives who do not live with you? Have they always been there? How many children did your grand parents have? Who do you think will be your new relatives in future?

My family and me

Do you look like anybody in your family? Have you learnt anything from anybody in your family? Whom do you admire most among all your relatives? Who is the most caring and patient person? When do you meet members of your family who do not live with you?

Whom do I look like?

Do some of your relatives look similar? Which features are similar – eyes, ears, the voice or height? Are there any two people in your family who look exactly alike?

1.2 PLANTS

Plants around us

How many different kinds of plants do you see around you? What are the differences you notice? What things around you are made of plants? Is there a plant in your area that was not there when your grandparents were young? Do you know of some plants which do not grow around you, say things that we eat and not grown around you?

Leaves in our lives

What different kinds of leaves do you see? Do you use plant leaves to eat on? In what other ways are leaves used? Is there some time of the year when lots of leaves fall to the ground? Are they burnt? Have you seen a compost pit? What leaf motifs do you find on clothes, pots, walls, animals, etc.? Do you decorate your house with leaves on some occasions?

1.3 ANIMALS

Animals: small and big

Which are the smallest and the biggest animals you have seen? Which have you only heard about? Which animals have tails? How many legs?

Some creepy crawlies – and flyers too

What different kinds of small crawling animals do you know? Where and from what does each of them hide? Which insects can crawl and also fly? Which ones bite us? Can flies make us ill? Why does a spider make a web?

Birds

Which are the birds you see around your area? Do they like some trees more than others? What do they eat? Can you recognize birds by their feathers? What are the different sounds they make? Are they saying something to each other? Are there some birds that come from other places? Do you feed any birds or place water for them?

1.4 WORK AND PLAY

Work around me

What are the different kinds of work done around me? What work does my mother/ father/ brother/ sister etc. do? What work do I do? What work do others do? When I am not working what do I do? When my father/ mother is not working what do they do?

Working children What kind of work was done by children when your grandparents were young? Has that changed today? Who are the children you know who work and go to

Class - 3

school/ who work and cannot go to school?

Games we play What games do I play? Did my grandparents play the same games? Are these indoor/outdoor?

2. Food

Foods from plants and animals

Which of these is food – red ants, bird's nests, snakes, bananas, goat's milk, etc.? What plants do you eat - what parts of the plant? What food do we take from animals?

Cooking

What do you eat that is not cooked? What is eaten only when cooked? How do you cook food? What do you cook it on? What are the different kinds of vessels used for cooking? What are they made of? Is water used in all forms of cooking? Which food is cooked without using water? How?

Eating in the family

Do all members of the family eat the same food in your family? Who eats more? Who eats last in your family? Who buys the food and what is bought from the market? Who cooks the food in your family? What do babies have for food? When do babies start eating and what do they eat other than milk?

What animals eat

Do animals eat the same things? What do different animals eat? Do you feed the animals around you - what? What do they take from your house even when not fed?

3. Shelter

Houses and houses

Have you seen - a house on stilts, a tent, a flat on the tenth floor, a house on wheels or a house on a boat? Do you know anyone living in such houses? Why do people use such houses?

Decorating and cleaning our shelter

How do you decorate your shelter? Do you draw designs on your walls/ floor or decorate with leaves/flowers/other objects? How do you keep your house clean? Do you also help in cleaning? Who mops and sweeps it? Where do you throw the garbage? Do you have any problems living in your house during rains, summer or winter? Have you seen houses with sloping roofs? Why are they made sloping?

My family and other animals

Who all live with you? Which animals live with Daily life experiences. you - which are the biggest and the smallest animals living in your house? From where do they get their food? Where in your house do these animals live? Which of them are seen only at night?

4. Water

Water for my family

What are the main sources of water in your locality? Who fetches the water and from how far? Do all the people in your locality use the same source of water? Are some people not allowed to take water from where you take it? From where do you get water? Does it look clean enough for drinking?

Do animals and plants need water?

What happens if plants and animals do not get water – how do you see that a plant or animal is thirsty? Do all animals/plants need the same amount of water? Which plants/ animals need the least?

Water shortage

When is it difficult to get water? Are there some people in your area who always face water shortage? What would happen if we had no water? Have you seen water being wasted – how? How can we avoid it? Do you reuse water?

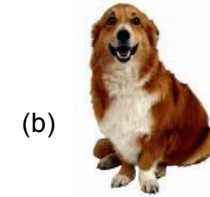
Water in our lives

Which of your daily activities use water? Do you and others you know wash your hands and feet before you enter the house? Why do you think this is done? Can you describe the scene of a rainy day – with details about birds, animals, plants and yourself.

Storing water



Q.1. Which living things cannot prepare their own food?



(c) Both

(d) None of these

Q.2. Human beings breathe in

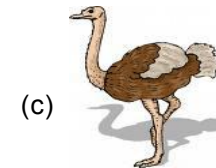
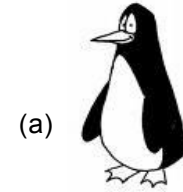
(a) Carbon dioxide

(b) Oxygen

(c) Water

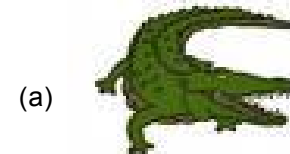
(d) None of these

Q.3. Which is the biggest and fastest bird?



(d) None of these



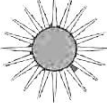
Q.4. Which of these animals crawl?



(c) Both (a) and (b)

(d) None of these

Q.5. A  breathes through

- (a) Gills (b) Skin
(c) Lungs (d) None of these
- Q.6.** Plants and trees reproduce through
(a) Young ones (b) Eggs
(c) Seeds (d) None of these
- Q.7.** Living things get energy from
(a) Sunlight (b) Water
(c) Food (d) None of these
- Q.8.** Changing of caterpillar into butterfly is
(a) Movement (b) Growth
(c) Circulation (d) None of these
- Q.9.** Giving birth to another living thing is called
(a) Respiration (b) Excretion
(c) Reproduction (d) None of these
- Q.10.** _____ cannot move from one place to another.
(a) Animals (b) Plants
(c) Both (a) and (b) (d) None of these
- Q.11.** Which of these is a living thing?
- (a)  (b) 
- (c)  (d) None of these
- Q.12.** All living things are
(a) Man-made (b) Natural
(c) Any of these (d) Both (a) and (b)
- Q.13.** Which of the following requires food to live and grow
(a) Non-living things (b) Living things
(c) Both (a) and (b) (d) None of these

TRUE OR FALSE

Write T for TRUE and F for FALSE in the given statement

- Q.14.** Plants move from place to place in search of food.
- Q.15.** Fishes breathe through air holes in their bodies.







- Q.16.** Non-living things need food for their growth.
- Q.17.** A plane can fly, so it is a living thing.
- Q.18.** Living things grow and keep changing all the time.
- Q.19.** All man made things are non-living.
- Q.20.** All natural things have life.



ANSWERS

1. (b) 2. (b) 3. (a) 4. (c) 5. (a) 6. (c) 7. (c) 8. (b)
9. (c) 10. (c) 11. (a) 12. (b) 13. (b) 14. (F) 15. (F) 16. (F)
17. (F) 18. (T) 19. (T) 20. (F)



- Q.1.** Which of the following function is not performed by the stem?
 (a) Respiration
 (b) Holding the plant upright
 (c) Carrying water and minerals to the leaves
 (d) None of these
- Q.2.** Process by which green plants make their own food is called
 (a) Reproduction (b) Photosynthesis
 (c) Germination (d) None of these
- Q.3.** During photosynthesis, which gas is given out
 (a) Oxygen (b) Carbon mono-oxide
 (c) Carbon-dioxide (d) None of these
- Q.4.** The most beautiful and coloured parts of plants are
- (a)  (b) 
- (c)  (d) None of these
- Q.5.** The green substance in plants is called
 (a) Chlorophyll (b) Stomata
 (c) Juice (d) None of these
- Q.6.** The food factory of the plant is
- (a)  (b) 
- (c)  (d) None of these
- Q.7.** Plants take water through their
 (a) Stem (b) Leaves
 (c) Roots (d) None of these
- Q.8.** Plants take carbon dioxide through

- (a) Flowers (b) Chlorophyll
 (c) Stomata (d) None of these
- Q.9.** We get wood from
 (a) Leaves of a tree (b) Roots of a tree
 (c) Trunk of a tree (d) None of these
- Q.10.** The stem of a tree is called
 (a) Branches (b) Trunk
 (c) Climbers (d) None of these
- Q.11.** The pores in the leaves of a plant are called
 (a) Holes (b) Gills
 (c) Stomata (d) None of these
- Q.12.** Plants make their food in the presence of
 (a) Moonlight (b) Both
 (c) Sunlight (d) None of these
- Q.13.** _____ gives support to leaves, flowers and fruits.
 (a) Root (b) Seed
 (c) Stem (d) None of these
- Q.14.** Grass is a
 (a) Herb (b) Creeper
 (c) Shrub (d) None of these
- Q.15.** The plant having weak stem is
 (a) Trees (b) Shrubs
 (c) Climbers (d) None of these
- Q.16.** The backbone of the plant is
 (a) Root (b) Stem
 (c) Branches (d) None of these
- Q.17.** The part of the plant above the soil is called
 (a) Shoot (b) Root
 (c) Boot (d) None of these
- Q.18.** Plants are fixed by
 (a) Stem (b) Branches
 (c) Roots (d) None of these

TRUE OR FALSE

Write T for TRUE and F for FALSE in the given statement

- Q.19.** Plant eating animals are called herbivores.
- Q.20.** Plants can make their food at night also.

- Q.21.** All flowers change into fruit.
Q.22. The plant food is stored in leaves, fruits, stem or roots.
Q.23. Only green plants make their own food.
Q.24. Plants breathe through leaves.
Q.25. Small and seasonal plants are called herbs.
Q.26. Shrubs are also called bushes.
Q.27. All plants have different shapes but same size.



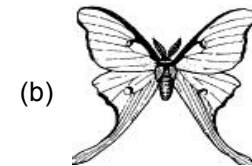
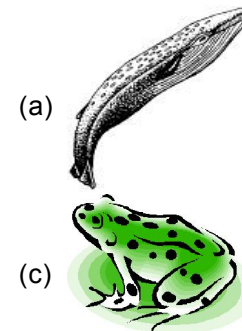
ANSWERS

1. (a) 2. (b) 3. (a) 4. (a) 5. (a) 6. (c) 7. (c) 8. (c)
 9. (c) 10. (b) 11. (c) 12. (c) 13. (c) 14. (a) 15. (c) 16. (b)
 17. (a) 18. (c) 19. (T) 20. (F) 21. (F) 22. (T) 23. (T) 24. (T)
 25. (T) 26. (T) 27. (F)



Chapter 3 ANIMALS

- Q.1.** Animals which give birth to young ones are called
 (a) Amphibians (b) Insects
 (c) Mammals (d) None of these
- Q.2.** Fish swims with the help of
 (a) Gills (b) Fins
 (c) Wings (d) None of these
- Q.3.** Butterfly sucks _____ from a flower.
 (a) Juice (b) Honey
 (c) Nectar (d) None of these
- Q.4.** The animal which can live both on land and in water is a/an.
 (a) Reptile (b) Amphibian
 (c) Mammal (d) None of these
- Q.5.** All insects have
 (a) four legs (b) Two legs
 (c) Six legs (d) None of these
- Q.6.** Feather of birds are used for making
 (a) Carpets (b) Pillows and quilts
 (c) Shoes (d) None of these
- Q.7.** Butter, cheese and curd are
 (a) Animal product (b) Both (a) and (b)
 (c) Plant product (d) None of these
- Q.8.** Skin of some animals is used to make
 (a) Cotton (b) Jute
 (c) Leather (d) None of these
- Q.9.** I have a long sticky tongue. I am a?



(d) None of these

Q.10. The animal which swallows the food as whole



(d) None of these

Q.11. Animals which bring the food back to their mouth for chewing again are

- (a) Wild animals (b) Cud chewing animals
(c) Gnawing animals (d) None of these

Q.12. Animals who bite food with their sharp teeth - the process is called

- (a) Chewing the food (b) Swallowing the food
(c) Gnawing the food (d) None of these

Q.13. The animals which feed on plants and animals are

- (a) Carnivorous (b) Omnivorous
(c) Herbivorous (d) None of these

Q.14. Flesh eating animals are called

- (a) Carnivorous (b) Omnivorous
(c) Herbivorous (d) None of these

Q.15. Plant eating animals are called

- (a) Carnivorous (b) Herbivorous
(c) Omnivorous (d) None of these

Q.16. The animals living in jungles are

- (a) Pet animals (b) Domestic animals
(c) Wild animals (d) None of these

Q.17. The pet animals and farm animals are called

- (a) Wild animals (b) Aquatic animals
(c) Domestic animals (d) None of these

TRUE OR FALSE

Write T for TRUE and F for FALSE in the given statement

Q.18. Frog is an amphibian.

Q.19. Scorpion and Crabs live in the cracks and gap between rocks.

Q.20. Trees, caves and bushes are natural shelters for some animals.

Q.21. Snails live in their shells.

Q.22. Pets and domestic animals live in man-made houses.

Q.23. Earthworm is called as 'Farmer's Friend'.

Q.24. We should kill animals to make different things from their skin.

Q.25. We make shoes and bags from leather.

Q.26. Zebra eats both plants and flesh of animals.

Q.27. Animals can make their own food.

Q.28. Bear is an omnivorous.

Q.29. All animals has four legs.

Q.30. Birds and insects can fly.

Q.31. All animals are useful to us.



ANSWERS

1. (c) 2. (b) 3. (c) 4. (b) 5. (c) 6. (b) 7. (a) 8. (c)
9. (c) 10. (a) 11. (b) 12. (c) 13. (b) 14. (a) 15. (b) 16. (c)
17. (c) 18. (T) 19. (T) 20. (T) 21. (T) 22. (T) 23. (T) 24. (F)
25. (T) 26. (F) 27. (F) 28. (T) 29. (T) 30. (T) 31. (T)



**NATIONWIDE BIOTECHNOLOGY
OLYMPIAD (NBTO)
SAMPLE PAPER**




Total duration : 40 Minutes

Total Marks : 25

GENERAL KNOWLEDGE

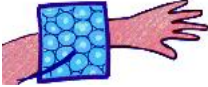
1. Is oil spill by an oil tanker in an ocean good?
(a) No, as it kills the nearby animals and plants
(b) Yes, so that mosquito do not breed
(c) Cannot say (d) None of these
2. Will it be good if the glaciers in Antarctica, Tibet etc melt?
(a) No (b) Yes
(c) Can't say (d) None of these
3. Is it ok if a factory throws polluted water in the river?
(a) Yes (b) No
(c) Can't say (d) None of these
4. Are commonly used water filters necessary evils?
(a) Yes because they waste lot of water in order to purify little amount of water
(b) No, they do not waste water
(c) Yes, because they use lot of electricity
(d) None of these
5. We should leave the room door open if the air conditioner is running.
(a) Yes, it will bring in fresh air
(b) No, it will waste electricity
(c) Can't say (d) None of these

E.V.S.

6. In your kitchen you have many natural products which work as a drug. Which of the following acts as an antiseptic?
(a)  Black pepper
(b)  Turmeric
(c)  Tamarind
(d) None of these
7. How biogas is used in villages ?
(a) To make food. (b) To run tractors.
(c) To clear the air. (d) To fill the cycle tube.

Class - 3

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8. What leaves need to make food?
(a) Oxygen (b) Soil
(c) Carbondioxide (d) None of these
9. When leaves are dead they turn
(a) Green in colour (b) Red in colour
(c) Brown in colour (d) None of these
10. If all plants disappear from earth then
(a) Nothing will happen
(b) Animals and human will die
(c) Water and Air will be finished on earth
(d) None of these
11. **'Humans are responsible for changing climate'**
Statement is
(a) True (b) False
(c) Can't say (d) None of these
12. Fungus have
(a) Stems (b) Flower
(c) Spores (d) None of these
13. You can see brown coloured spots on bread when it is kept for 2 or 3 days in
(a) Sealed container (b) Refrigerator
(c) Dark and moist place
(d) None of these
14. Which of the following your mother uses to preserve pickles?
(a) Water (b) Salt
(c) Chillies (d) None of these
15. 
The tiny building blocks shown in picture are called
(a) Germs (b) Bacteria
(c) Cells (d) None of these
16. What Biotechnologist do ?
(a) Make poor quality goods.
(b) Make useful and high quality products using living things.
(c) Make high quality products using non living things.
(d) None of these

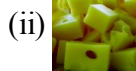
17. What can we do to reduce water pollution?
 (a) Dump trash into lakes
 (b) Clean up oil spills properly
 (c) Pour chemicals into drain
 (d) None of these
18. All children below five years of age should take _____ vaccination every month.
 (a) Cold (b) Cough
 (c) Polio (d) None of these
19. Which of the following is true?
 (a) Sunlight helps germs to grow
 (b) Dustbin should be covered
 (c) Floors should be swept once in a year
 (d) None of these
20. To kill germs in house hold water,
 (a) Water should be boiled
 (b) Chlorine is added to water
 (c) Both (a) and (b)
 (d) Pesticides and insecticides are added to water

INTERACTIVE QUESTIONS

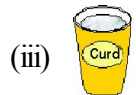
21. Which of the following is made using bacteria?



Chocolate



Cheese



Curd



Vineger

(a) Only (i)

(b) Only (ii), (iii)

(c) All the four

(d) None of these

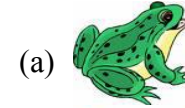


The picture shows that

- (a) All living things need food
 (b) All living things feel
 (c) All living things grow (d) None of these



Catterpillar, when they grow up becomes.



(d) None of these

24. Identify the odd term?



25. Which part of your body store food for future use?



(d) None of these

☺ END OF THE EXAM ☺

ANSWERS

- | | | | | |
|---------|---------|---------|---------|---------|
| 1. (a) | 2. (a) | 3. (b) | 4. (a) | 5. (b) |
| 6. (b) | 7. (a) | 8. (c) | 9. (c) | 10. (b) |
| 11. (a) | 12. (c) | 13. (c) | 14. (b) | 15. (c) |
| 16. (b) | 17. (b) | 18. (c) | 19. (b) | 20. (c) |
| 21. (c) | 22. (c) | 23. (c) | 24. (d) | 25. (b) |

☺☺☺