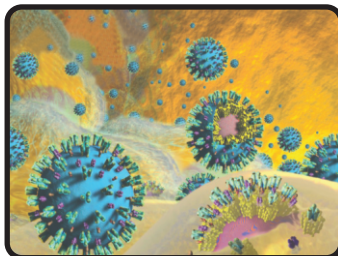


EtG

OLYMPIAD EXPLORER BIOTECHNOLOGY

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Class-4

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

SYLLABUS GUIDELINES

CLASS - IV

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

1. FAMILY AND FRIENDS

1.1 Relationships

Your mother as a child

When your mother was your age who were the relatives she lived with?

Where do babies come from?

Have you seen a newborn baby - where did she come from? Where does the puppy/ kitten/ calf/ chick come from? Do you know of people who are looking after/ have adopted a child?

Feeling around with eyes shut

With your eyes and ears closed can you identify the people/animals living with you merely by touching/smelling? By touching can you tell if anything is cold/hot, wet/ dry, smooth/ rough, sticky/slippery, soft/hard? Are there some things which you are not allowed to touch? Do you feel uncomfortable when some people touch you?

1.2 Work and play

Fun and fights at play! Do you play the same games at school that you play at home? What things do you use to play with? Does the school provide these? Do you fight while you play? How do you decide the rules for the games? Does anyone stop you from playing? Who and why? Do you play with every child (boys and girls) in your neighbourhood? Are you stopped from playing with certain children?

1.3 Animals

Animals and their friends

Which animals like to move around in groups? Which animals are shy and do not come near you? Have you seen animals playing with or riding on different animals?

Who is attracted to flowers?

Why do bees/butterflies come to flowers? How do people collect the honey from bee hives?

Long ears or short?

Which animals have ears? Which animals have hair on their body?

1.4 PLANTS

Roots of plants

Do all plants need water to grow? Which part of the plant absorbs water from the soil? When you tug at grass, why does it not come out easily? Why do plants/trees not get uprooted when there is a strong wind? Which roots are eaten by people during famine when nothing else grows?

Flowers

Which plants around us have flowers? Do they come only at some times of the year? How is the bud different from the flower? What are the different kinds of flowers we have seen – shapes, colours, petals, aroma, etc? What do we use flowers for? Do you eat any flower? Have you seen flowers motif painted on clothes, walls, floors, pots, animals? Who sells flowers in our area? Where do these come from? How are flowers sold - for how much?

Whom do trees belong to?

Which plants/trees around you are looked after by people – by whom? Which are not? Whom do they belong to? Who eats the fruit of trees that grow wild?

2. FOOD

How we get our food

How does food reach us? Who grows it? How you seen vegetables and fruits growing? How you seen plants of rice/ wheat/ dal etc? What are the spices do you know? Which spices can we recognize by smelling or tasting.

Class - 4

V

Special occasions

When do many people eat together? What food is eaten? Who cooks it? How is it served? Does you get a mid day meal meal in school? - What items? Who provides the mid day meal?

Tongue and Teeth

How do we taste different foods? How do teeth help us to eat – are all teeth similar? Which teeth have I dropped and how are the new ones different?

Teeth, beaks and claws

Are the teeth of other animals similar to ours? Can we tell what birds eat by looking at their beaks? Are the claws of birds also different? Is their shape related to the food they eat?

3. SHELTER

Houses then and now

Do you live in houses similar to ones your grandparents lived in ? Are houses now made of similar materials as was used then? What are the differences?

Garbage?

What do you do with waste in your house? Where do you throw it? Do you reuse any waste materials? Who takes away the garbage?

Where animals live

Do animals live in shelters? Which animals live in water? On land? Underground? Are there any animals that we see only at night? Where do they go during the day? Do we know of animals that make their own shelter?

When birds make nests

When and why do birds make their shelter? Do all birds make nests? Where do different birds nest - when do they fly away? With what different materials do birds make their nests?

Mapping our neighbourhood

Who are my neighbors? Do I have any of the following near my house – a school, grocery shop, market, well, river or pond? Where are they with respect to your house?

4. WATER

Water fit for drinking

What are the major natural sources of water in your area? Is the water fit for drinking – do you clean it at home? Do you know how dirty water can make you ill? Why do we not drink seawater? How is salt separated from seawater?

Water sources

Where do you see large amounts of water in your neighborhood? Is it a tank/pond/canal/river/ dam? What do men/ w o m e n / c h i l d r e n / animals do with the water there? Is it used for bathing/washing? Who bathes/washes there and who does not? How can we ensure that this water is not made dirty?

Do you find factories/ people dumping garbage or harmful materials rivers or seas? Are some animals also facing problems due to what we do to the rivers or seas?

Our river/sea

Which is the river closest to our locality? Do we find any change in the water flow in different seasons? Which are the big rivers we know of? Have you seen the sea? Which are the animals found in the sea/river?

Water vanishes when heated?

Why do puddles dry? In which season do wet clothes dry easily? When do they dry with difficulty? Have you seen and wondered where water droplets on the outside of a cold glass of water came from?

Travel to another place

Do you know anyone who has traveled very far from your village/city? Why did they go so far? What are they doing there? How do they travel when they visit your family?

6. Things We Make And Do

Building materials and tools

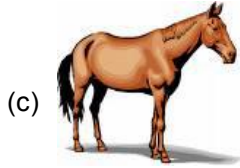
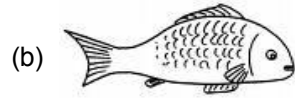
How are bricks made? What tools have you seen being used for making a wall or a house? Is there a bridge to cross while coming to school? What kinds of bridges have we seen and where? How many kinds of bridges can we make?



Chapter 1 LIVING AND NON-LIVING THINGS

- Q.1.** Which option refers only to living things?
(a) Birds, trees, worms
(b) Trees, worms, clouds
(c) Rivers, birds, trees
(d) None of these
- Q.2.** Which kingdom of living things make their own food?
(a) Animals (b) Plants
(c) Both (d) None of these
- Q.3.** Which is the correct direction of sunflower's face?
(a) Towards the sun
(b) Opposite the face of sun
(c) Down ward toward ground
(d) None of these
- Q.4.** The process of giving birth to young ones is called
(a) Excretion (b) Circulation
(c) Reproduction (d) None of these
- Q.5.** The process by which plants make their food is called
(a) Photosynthesis (b) Respiration
(c) Reproduction (d) None of these
- Q.6.** Fish breathe through
(a) Gills (b) Skin
(c) Fins (d) None of these
- Q.7.** Living things get energy from
(a) Air (b) Food
(c) Water (d) None of these
- Q.8.** Plants reproduce through
(a) Eggs (b) Babies
(c) Seeds (d) None of these
- Q.9.** Plants breathe in
(a) Oxygen (b) Carbon dioxide
(c) Carbon monoxide (d) None of these
- Q.10.** _____ have definite Shape.
(a) Animals (b) Plants
(c) Both (a) and (b) (d) None of these

Q.11. I breathe through gills, I am a _____.



(d) None of these

Q.12. Living things

- (a) Do not grow (b) Grow
(c) Both (a) and (b) (d) None of these

Q.13. Non-living things

- (a) Cannot breathe (b) Always breathe
(c) Can breathe (d) None of these

Q.14. Animals breathe through

- (a) Stomata (b) Skin
(c) Nose (d) None of these

Q.15. Plants breathe through

- (a) Roof (b) Leaves
(c) Stem (d) None of these

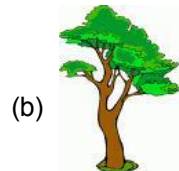
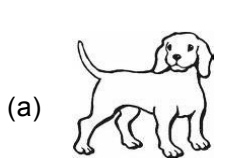
Q.16. _____ move in search of food.

- (a) Animals (b) None of these
(c) Plants (d) All of the above

Q.17. _____ can make their own food.

- (a) Animals (b) Plants
(c) Human beings (d) None of these

Q.18. Which of these is a non living thing?



(d) None of these

Q.19. All man made things are

- (a) Non-living things (b) Living things
(c) None of these (d) Both (a) and (b)

Q.20. Plants, animals and human beings are

- (a) Non-living things (b) Man made things
(c) Living things (d) None of these

TRUE OR FALSE

Write T true and F for False in the given statement

Q.21. Plants also excrete waste.

Q.22. All living things reproduce.

Q.23. Plants and animals have same body parts.

Q.24. Some living things live in water.

Q.25. Moving car is a living thing.

Q.26. Non-living things can breath.

Q.27. Air, water and food are the basic needs of living things.

Q.28. Movement is a characteristic of living beings.

Q.29. Plants do not breath.

Q.30. Animals make their own food.

Q.31. All living things grow old and die.

Q.32. The shape of any two plants is not same.

Q.33. Living things are man-made.



Q.34. All natural things have life.

Q.35. All living things need food to grow.

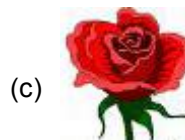
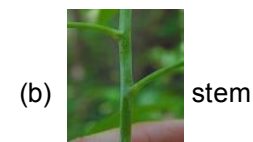


1. (a) 2. (b) 3. (a) 4. (c) 5. (a) 6. (a) 7. (b) 8. (c)
9. (b) 10. (c) 11. (b) 12. (b) 13. (a) 14. (c) 15. (b) 16. (a)
17. (b) 18. (c) 19. (a) 20. (c) 21. (T) 22. (T) 23. (F) 24. (T)
25. (F) 26. (F) 27. (T) 28. (T) 29. (F) 30. (F) 31. (T) 32. (T)
33. (F) 34. (F) 35. (T)



- Q.1.** What three things do plants need to grow?
 (a) Water, Carbon-dioxide, Sunlight
 (b) Water, Sugar, Air
 (c) Water, Heat, Oxygen
 (d) None of these
- Q.2.** Plants stores extra food in the form of
 (a) Starch (b) Carbon-dioxide
 (c) Chlorophyll (d) None of these
- Q.3.** Which of the following part is modified into pitcher in a pitcher plant?
 (a) Stem (b) Nodes
 (c) Leaf (d) None of these
- Q.4.** Desert plants have
 (a) Fibrous roots (b) Tap roots
 (c) None of these (d) Any of these
- Q.5.** Mushroom are
 (a) Non-green plants
 (b) Flowering plants
 (c) Green plants
 (d) None of these
- 
- Q.6.** The flat part of the leaf is called
 (a) Leaf blade (b) Node
 (c) Midrib (d) None of these
- Q.7.** The process of removing chlorophyll from leaves is called
 (a) Bleaching (b) Chlorination
 (c) Photosynthesis (d) None of these
- Q.8.** Plants water under breath through
 (a) Stomata (b) Body surface
 (c) Gills (d) None of these
- Q.9.** Water plants have stomata on the
 (a) Under side of leaf (b) Upper side of leaf
 (c) Both (a) and (b) (d) None of these
- Q.10.** The spines of Cactus plants are modified
 (a) Stems
 (b) Flowers
 (c) Leaves
 (d) None of these
- 

- Q.11.** In Cactus, food is stored in
 (a) Roots (b) Green stem
 (c) Leaves (d) None of these
- Q.12.** End product of photosynthesis is
 (a) Chlorophyll (b) Fruit
 (c) Glucose (d) None of these
- Q.13.** Stomata are present on
 (a) Both side of leaves (b) On the flowers
 (c) Upper side of leaves (d) None of these
- Q.14.** The pores in the leaves are called
 (a) Lungs (b) Stomata
 (c) Gills (d) None of these
- Q.15.** To make food, the energy from the sun is trapped in
 (a) Chlorophyll (b) Stem
 (c) Stomata (d) None of these
- Q.16.** The food is stored in the plants in the form of
 (a) Starch (b) Chlorophyll
 (c) Protein (d) None of these
- Q.17.** The food factory of plant is



(d) None of these

- Q.18.** Plants make food
 (a) During day and night (b) During night
 (c) During day (d) None of these

TRUE OR FALSE

Write T for True and F for False in the given statement

- Q.19.** Non-green plants make their own food.
- Q.20.** All fruits are made from flowers.
- Q.21.** Underwater plants have leaves without pores.
- Q.22.** Plants can not grow in water.
- Q.23.** The excess food made in leaves is stored in the form of starch.

- Q.24.** Glucose is a kind of sugar.
- Q.25.** Iodine solution is used to test for starch.
- Q.26.** Plants can make their food at night also.
- Q.27.** Lotus have stomata on upper side of the leaf.
- Q.28.** The plant food is stored either in leaves, fruit, stem or roots.

Match the following

- Q.29.**
- | Column I | Column II |
|-------------------------|-------------|
| A. Is a grass | P. Coconut |
| B. Have spongy stem | Q. Mushroom |
| C. Is a fungi | R. Bamboo |
| D. Is a evergreen tree | S. Cactus |
| E. Have breathing roots | T. Mangrove |

- Q.30.**
- | Column I | Column II |
|----------------------------------|----------------------|
| A. Grow in water | P. Desert plant |
| B. Do not make their | Q. Floating plants |
| C. Do not have leaves | R. Non-green plants |
| D. Leaves have thin waxy coating | S. Underwater plants |
| E. Breath through body surface | T. Aquatic plant |

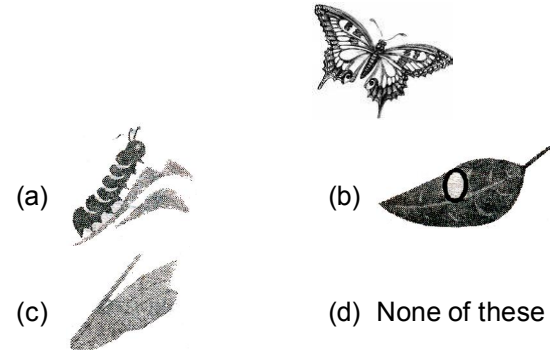


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 9. (b) 10. (c) 11. (b) 12. (c) 13. (a) 14. (b) 15. (a) 16. (a)
 17. (a) 18. (c) 19. (F) 20. (T) 21. (T) 22. (F) 23. (T) 24. (T)
 25. (T) 26. (F) 27. (T) 28. (T) 29. (A-R, B-S, C-Q, D-P, E-T)
 30. (A-T, B-R, C-P, D-Q, E-S)



Chapter **3** **ANIMALS**

- Q.1.** A baby chick grows inside an egg for 21 days before it hatches. Where does the baby chick get its food before it hatches?
 (a) It uses food stored in the egg.
 (b) It eats the egg shell
 (c) It is fed by the mother hen.
 (d) None of these
- Q.2.** Which one of these animals does not lay eggs?
 (a) Dogs (b) Frogs
 (c) Chickens (d) None of these
- Q.3.** Birds are different from insects because birds have
 (a) Feathers (b) Legs
 (c) Wings (d) None of these
- Q.4.** Butterfly has four stages which one is second stage?



- Q.5.** The longer winter sleep is called
 (a) Moulting (b) Coma
 (c) Hibernation (d) None of these
- Q.6.** Shedding of old skin is called
 (a) Moulting (b) Camouflage
 (c) Reproduction (d) None of these
- Q.7.** The animals whose body temperature remains constant during all seasons are
 (a) Cold blooded animals (b) Warm blooded animals
 (c) Both (a) and (b) (d) None of these
- Q.8.** The only mammal which lay eggs is
 (a) Platypus (b) Dolphin
 (c) Whale (d) None of these

Q.9. The place where animals live is

- (a) Adaptation (b) Zoo
(c) Habitat (d) None of these

Q.10. Frog lay its eggs



- (a) On land (b) In water
(c) None of these (d) Both (a) and (b)

Q.11. Animals which give birth to young ones are

- (a) Mammals (b) Insects
(c) Reptiles (d) None of these

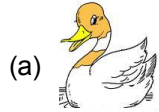
Q.12. Animals without backbone are called

- (a) Vertebrates (b) Invertebrates
(c) Reptiles (d) None of these

Q.13. Animals with backbone are

- (a) Invertebrates (b) Insects
(c) Vertebrates (d) None of these

Q.14. Which is a arboreal animal?



(d) None of these

Q.15. The animals which live on trees are called

- (a) Terrestrial animals (b) Arboreal animals
(c) Aquatic animals (d) None of these

Q.16. The animal having hollow bones

- (a) Birds (b) Reptiles
(c) Mammals (d) None of these

Q.17. The animal which can live both on land and in water

- (a) Reptiles (b) Amphibian
(c) Arboreal (d) None of these

Q.18. The branch of science which deals with the study of animals is

- (a) Botany (b) Astrology
(c) Zoology (d) None of these

TRUE OR FALSE

Write T for True and F for False in the given statement

Q.19. Monkey is an arboreal animal.

Q.20. Warm blooded animals don't need to hibernate.

Q.21. Sick animals are cured in veterinary hospital.

Q.22. The fat deposition under the skin protects animals from cold climate.

Q.23. All zebras has identical stripes.

Q.24. Camouflage helps the animal to hide from its enemy.

Q.25. All Mammals are terrestrial.

Q.26. Fish lays thousands of eggs at a time.

Q.27. Whales lay eggs in water.

Q.28. All cold blooded animals undergo a sleeping period called hibernation.

Q.29. Both amphibians and reptiles lay eggs.

Q.30. All birds can fly.

Q.31. Mammals are cold-blooded animals.

Q.32. Whale is a mammal.

Q.33. Frog is an amphibian.

Match the following

Q.34.

Column I

Column II



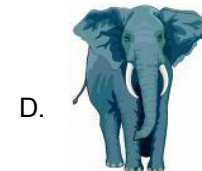
P. Aquatic



Q. Amphibian



R. Terrestrial



S. Aerial

Q.35.

Column I

- A. Bird
B. Frog
C. Housefly
D. Butterfly
E. Cockroach

Column II

- P. Caterpillar
Q. Nymph
R. Larva
S. Embryo
T. Tadpole

☺☺☺

1. (a) 2. (a) 3. (a) 4. (a) 5. (c) 6. (a) 7. (b) 8. (a)
9. (c) 10. (b) 11. (a) 12. (b) 13. (c) 14. (b) 15. (b) 16. (a)
17. (b) 18. (c) 19. (T) 20. (T) 21. (T) 22. (T) 23. (F) 24. (T)
25. (F) 26. (T) 27. (F) 28. (T) 29. (T) 30. (F) 31. (F) 32. (T)
33. (T) 34. (A-Q, B-S, C-P, D-R) 35. (A-R, B-P, C-T, D-Q, E-S)

☺☺☺

Chapter 4 HUMAN BODY

- Q.1.** The organ which produces bile juice
(a) Stomach (b) Liver
(c) Liver (d) None of these
- Q.2.** The two bean shaped organs of our body are
(a) Kidney (b) Stomach
(c) Lungs (d) None of these
- Q.3.** The organ which is J-Shaped is
(a) Liver (b) Pancreas
(c) Stomach (d) None of these
- Q.4.** The undigested food passes to
(a) Large intestine (b) Small intestine
(c) Both (a) and (b) (d) None of these
- Q.5.** The organ which filters waste products from the blood is
(a) Liver (b) Kidney
(c) Lungs (d) None of these
- Q.6.** Which is not a part of the circulatory system?
(a) Heart (b) Arteries
(c) Lungs (d) None of these
- Q.7.** The brain and nerves form the
(a) Circulatory system (b) Nervous system
(c) Respiratory system (d) None of these
- Q.8.** The kidney, lungs and skin are the organs of
(a) Excretory system (b) Digestive system
(c) Respiratory system (d) None of these
- Q.9.** The system which gives shape and movement to the body is
(a) Nervous system (b) Circulatory system
(c) Skeleton system (d) None of these
- Q.10.** The sense organs are controlled by
(a) Nervous system (b) Circulatory system
(c) Respiratory system (d) None of these
- Q.11.** Heart, blood and blood vessels are the organs of
(a) Respiratory system (b) Circulatory system
(c) Nervous system (d) None of these
- Q.12.** The chamber on the lower side of the heart is known as
(a) Auricles (b) Aorta
(c) Ventricles (d) None of these

- Q.13.** The chamber on the upper side of the heart is known as
 (a) Auricles (b) Aorta
 (c) Ventricles (d) None of these
- Q.14.** The skull protects the
 (a) Heart (b) Eyes
 (c) Brain (d) None of these
- Q.15.** Number of bones in a new born baby is
 (a) 206 (b) 200
 (c) 270 (d) None of these
- Q.16.** The ribcage holds the
 (a) Lungs and heart (b) Stomach and liver
 (c) Brain (d) None of these
- Q.17.** The blood cells of our body are made in
 (a) Heart (b) Brain
 (c) Bone marrow (d) None of these
- Q.18.** Muscles of the heart are called
 (a) Pumping muscles
 (b) Cardiac muscles
 (c) Push and pull muscles
 (d) None of these
- Q.19.** The blood vessels which carry pure blood are
 (a) Veins (b) Arteries
 (c) Both (a) and (b) (d) None of these
- Q.20.** When the heart beats faster it is known as
 (a) Heart attack (b) Precipitation
 (c) Palpitation (d) None of these
- Q.21.** Doctors can hear the sound of heart beat through
 (a) Telescope (b) Microscope
 (c) Stethoscope (d) None of these
- Q.22.** Circulation of blood takes place in
 (a) Heart (b) Lungs
 (c) Liver (d) None of these
- Q.23.** The biggest sense organ of our body is
 (a) Brain (b) Eyes
 (c) Skin (d) None of these
- Q.24.** The functions of all the body parts is controlled by the
 (a) Brain (b) Spinal cord
 (c) Heart (d) None of these
- Q.25.** Oesophagus is also known as
 (a) Wind pipe (b) Water pipe
 (c) Food pipe (d) None of these

- Q.26.** The air we breath in passes through
 (a) Wind pipe (b) Food pipe
 (c) Both (a) and (b) (d) None of these
- Q.27.** The process of breathing out air is called
 (a) Inhalation (b) Circulation
 (c) Exhalation (d) None of these
- Q.28.** The process of breathing in air is called
 (a) Inhalation (b) Circulation
 (c) Exhalation (d) None of these
- Q.29.** When we exhale air, lungs
 (a) Expands (b) Has no effect
 (c) Contracts (d) None of these
- Q.30.** We should breath in air through
 (a) Mouth (b) Nose
 (c) Both (a) and (b) (d) None of these
- Q.31.** Which air is rich in oxygen?
 (a) Inhale air (b) Exhale air
 (c) Both (a) and (b) (d) None of these
- Q.32.** The Largest internal organ is
 (a) Heart (b) Large intestine
 (c) Liver (d) None of these
- Q.33.** Eyes, Nose and Ears are
 (a) External organs (b) Internal organs
 (c) Both (a) and (b) (d) None of these
- Q.34.** The organs inside the human body are
 (a) External organs (b) Internal organs
 (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.35.** The stomach is made up of muscles.
- Q.36.** Liver saves the body from poisonous chemicals.
- Q.37.** Skin is an internal organ.
- Q.38.** There are two types of muscles-voluntary and involuntary.
- Q.39.** Kidney are blood purifiers.
- Q.40.** Liver is called the chemical factory of the body.
- Q.41.** A body has more than 650 muscles.
- Q.42.** The heart is made up of bones.
- Q.43.** The large intestine is bigger than the small intestine.

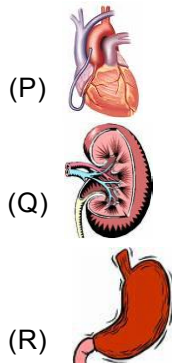
- Q.44. Stomach is the organ of digestion.
- Q.45. The liver helps in digestion of fat.
- Q.46. The heart has two chambers.
- Q.47. Veins are thin blood vessels and are blue in colour.
- Q.48. Our lungs expand and contract during respiration process.
- Q.49. The heart is located inside our chest.
- Q.50. Exhale air is rich in oxygen.
- Q.51. Blood carries food and oxygen to all body parts.
- Q.52. The system that controls all other systems of the body is the nervous system.
- Q.53. The framework of bones is called skeleton system.
- Q.54. Adult has more bones than the new born baby.
- Q.55. All sense organs send messages to our brain.
- Q.56. The veins carry pure blood.
- Q.57. The circulatory system provides oxygen to all parts of body.
- Q.58. Skin is the sense organ of touch.
- Q.59. Bones protects the inside parts of our body.
- Q.60. Bones and muscles work separately.

Match the following

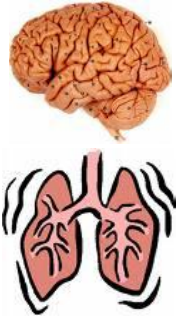
- | Q.61. Column I | Column II |
|-------------------|-------------|
| A. Largest organ | (a) Heart |
| B. Bean shaped | (b) Liver |
| C. Size of fist | (c) Stomach |
| D. Air-filled sac | (d) Kidneys |
| E. J-shaped organ | (e) Lungs |

Q.62. Match the Column I and II

- | Column I | Column II |
|---|-----------|
| A. Organ of excretory system | (P) |
| B. Pumps blood to all parts of the body | (Q) |
| C. Controls all our actions | (R) |



- D. Exchange of gases takes place (S)
- E. Helps in digestion of food (T)



Match the Column I and II

- | Q.63. Column I | Column II |
|---|------------------------|
| A. Removes waste from the body | (P) Circulatory system |
| B. Controls all the functions of the body | (Q) Muscular system |
| C. Carries blood to all parts of the body | (R) Nervous system |
| D. Helps in movement of the body | (S) Skeleton system |
| E. Supplies oxygen to the body | (T) Excretory system |
| F. Gives shape and support to the body | (U) Respiratory system |



- | | | | | | | | |
|-------------------------------|---------|---------|---------|------------------------------------|---------|---------|---------|
| 1. (b) | 2. (a) | 3. (c) | 4. (a) | 5. (b) | 6. (c) | 7. (b) | 8. (a) |
| 9. (c) | 10. (a) | 11. (b) | 12. (c) | 13. (a) | 14. (c) | 15. (c) | 16. (a) |
| 17. (c) | 18. (b) | 19. (b) | 20. (c) | 21. (c) | 22. (a) | 23. (c) | 24. (a) |
| 25. (c) | 26. (a) | 27. (c) | 28. (a) | 29. (c) | 30. (b) | 31. (a) | 32. (c) |
| 33. (a) | 34. (b) | 35. (T) | 36. (T) | 37. (F) | 38. (T) | 39. (T) | 40. (T) |
| 41. (T) | 42. (F) | 43. (F) | 44. (T) | 45. (T) | 46. (F) | 47. (T) | 48. (T) |
| 49. (T) | 50. (F) | 51. (T) | 52. (T) | 53. (T) | 54. (F) | 55. (T) | 56. (F) |
| 57. (T) | 58. (T) | 59. (T) | 60. (F) | 61. (A-Q, B-S, C-P, D-T, E-R) | | | |
| 62. (A-T, B-P, C-S, D-Q, E-R) | | | | 63. (A-T, B-R, C-P, D-Q, E-U, F-S) | | | |



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

Total duration : 40 Minutes

Total Marks : 25

GENERAL KNOWLEDGE

1. Do biotechnologists help us to make new type of clothes?
(a) Yes (b) No
(c) Can't say (d) None of these
2. From environment point of view using plastic tea cups is better than Earthen cups?
(a) Yes (b) No
(c) Can't say (d) None of these
3. Which is better for the environment?
(a) Vegetable dyes (b) Synthetic dyes
(c) Both of (a) & (b) (d) None of these
4. Rainwater should be?
(a) Harvested using rain water harvesting
(b) Allowed to run-off
(c) Stored for emergency use
(d) None of these
5. Fermentation process help us to prepare.
(a) Curd (b) Bread
(c) Cheese (d) All of these

E.V.S.

6. DNA is present in
(a) 100 cells of our body
(b) Only brain cells of our body
(c) Each cell of our body (d) None of these
7. "Parents pass traits on to their children." The statement is
(a) True (b) False
(c) Can't say (d) None of these
8. Which of the following features you will not get from your parents?

Class - 4

43

- (a) Colour of your eyes (b) Your blood group
(c) Both (a) and (b) (d) None of these
9. Genes are packed in
(a) Bottles (b) Boxes
(c) Cells (d) None of these
10. A clone receives
(a) Half gene from mother and half gene from father
(b) All genes from mother
(c) All genes from father
(d) None of these
11. What will happen if more and more smoke is released from the vehicles ?
(a) No change
(b) Mosquitoes go away
(c) Air becomes bad
(d) We can not see the things properly
12. A, C, G and T live in a colony. A-T and C-G are good friends. A gives two apples whenever he meets T and C gives three apples to G on each meeting.

Meeting	Monday	Tuesday
A – T	3 times	2 times
C – G	2 times	4 times

How many apples does G get on Tuesday.
(a) 6 (b) 4 (c) 12 (d) none of these
13. From where you can get the healthy plantlets or seeds to grow the plants?
(a) Bank (b) Nursery
(c) Computer lab (d) None of these
14. Which of the following is the name of a vaccine?
(a) ABC (b) BCG
(c) DDT (d) None of these
15. We can prevent food items from getting spoilt by putting them in refrigerator because
(a) Refrigerator have tight doors.
(b) Bacteria needs very hot temperature to grow.

- (c) Bacteria are not able to grow in cold temperature.
 (d) None of these.
16. Most helpful tool in the process of biotechnology is / are
 (a) Plants (b) Microbes
 (c) Animals (d) None of these
17. What is true about vaccines?
 (a) Take vaccine when you need it otherwise it can cause you disease.
 (b) All children should get all necessary vaccination.
 (c) One time vaccination guarantee that you won't get the disease again.
 (d) None of these.
18. Which of the following material can enrich the soil with nutrients?
 (a) Dead and decayed plant material.
 (b) Cow dung.
 (c) Both (a) and (b) (d) None of these
19. Which of the following living thing make the baked items rise?
 (a) Baking soda (b) Baking powder
 (c) Yeast (d) All of these
20. With whom your DNA should match?
 (a) Your mother (b) Your father
 (c) Your friend (d) Both (a) and (b)

INTERACTIVE QUESTIONS

21.



The answer to this question is

- (a) Environment (b) Genes
 (c) Habitat (d) None of these

22. Which of the following is not made up of cells?




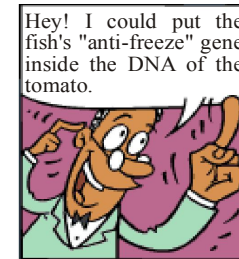
- (a)  (b) 
 (c)  (d) None of these

Figure for Q. 23 and Q. 24



23. The person in the figure is a

- (a) Doctor (b) Biotechnologist
 (c) Inspector (d) None of these

24. If this man is able to do so then the grown up tomato would

- (a) Looked like fish in colour and size
 (b) Not be red in colour
 (c) Be like normal tomato but would be able to grow in the cold weather.
 (d) None of these.

25. Find the odd one out on the basis of their reproduction?

- (a)  (b)  (c)  (d) 

☺ END OF THE EXAM ☺

ANSWERS

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

☺☺☺