

## Diversity in Living Organisms

## 1. NCERT INTEXT QUESTIONS

1. Why do we classify organisms?

Ans :

We classify organisms for easier and convenient study.

2. Give three examples of the range of variations from daily life.

Ans :

- (a) Small cat and big cow
- (b) Grass and coconut tree
- (c) Black crow and green parrot

3. Which do you think is a more-basic characteristic for classifying organisms?

- (a) The place where they live,
- (b) the kind of cells they are made of, Why?

Ans :

- (b) The kind of cells they are made of because various organisms can live in a habitat and it is possible that they have no common factor except habitat. Thus, habitat cannot be basic characteristic for classifying organism.

Download All PDF files from [www.rava.org.in](http://www.rava.org.in).

4. What is the primary characteristic on which the first division of organisms is made?

Ans :

Nature of cell is the primary characteristics for the first division of organisms to decide as prokaryotic or eukaryotic cell.

5. What is the basis on which plants and animals put into different categories?

Ans :

Mode of nutrition is the basis on which plants and animal put into different categories.

6. Which organisms are called primitive and how are they different from the advanced organisms?

Ans :

Organisms with simple cellular structure and no division of work are called primitive. Advanced organisms are those who have million of cells and there are different organs and organ system for different biological functions.

7. Will advanced organisms be the same as complex

organisms? Why?

Ans :

Yes, advanced organisms will be the same as complex organism because advanced organism have undergone increasingly complex body design during evolution time.

8. What is the criterion for classification of organisms as belonging to kingdom Monera or Protista?

Ans :

**Kingdom – Monera :** These are prokaryotic in nature and unicellular. These do not have membrane bound nucleus and cell organelles. E.g. Mycoplasma and most bacteria.**Kingdom – Protista :** These organisms are unicellular and eukaryotic. Nucleus and membrane bound other cell organelles are present in this. E.g. Protozoa like algae and diatoms.

9. In which kingdom will you place an organism which is single-celled, eukaryotic and photosynthetic?

Ans :

Protista.

10. In the hierarchy of classification, which grouping will have the smallest number of organisms with a maximum of characteristics in common and which will have the largest number of organisms?

Ans :

Kingdom Monera will have the small number of organisms with a maximum of characteristics in common. And kingdom Animalia will have the largest number of organisms.

11. Which division among plants has the simplest organisms?

Ans :

Thallophyta or algae.

12. How are pteridophytes different from the phanerogams?

Ans :

	Pteridophytes	Phanerogams
1.	They have naked embryos.	Embryo is present in seed.
2.	Reproductive organs are hidden.	Seed also contains stored food.

3.	Pteridophytes have special tissue for conduction of water.	Phanerogams have well-developed vascular tissue.
----	--	--

5.	Respiration occurs through skin or parapodia, e.g. earthworm, aphrodite.	Respiration occurs through tracheae or book lungs, e.g. prawn, cockroach.
----	--	---

13. How do gymnosperms and angiosperms differ from each other?

Ans :

	Gymnosperms	Angiosperms
1.	The plants of this group bear naked seeds which further becomes a fruit.	The plants of this group bear seeds enclosed inside an organ.
2.	Many cotyledons are present.	Only one or two Cotyledons are present.
3.	Plants are usually perennial, evergreen and woody.	Plants may be annual, biennial, perennial, woody or non-woody.

Add 89056 29969 in Your Class Whatsapp Group to Get All PDF Files.

14. How do poriferan animals differ from coelenterate animals?

Ans :

	Poriferan animals	Coelenterate animals
1.	They are mostly marine, non-motile and found attached to rocks.	They are exclusively marine animals that either live in colonies or have a solitary life span.
2.	They show cellular level of organisation.	They show tissue level of organisation.
3.	Example : Spongilla	Example : Hydra.

15. How do annelida animals differ from arthropoda?

Ans :

	Annelida	Arthropoda
1.	They have no distinct heads.	Body is divided into head, thorax and abdomen.
2.	Exoskeletons are absent.	Body is covered by chitinous exoskeletons.
3.	They have no jointed appendages.	They have jointed appendages.
4.	Excretion occurs through nephridia.	Excretion occurs through coxal gland on malpighian tubules.

16. What are the differences between amphibians and reptiles?

Ans :

	Amphibians	Reptiles
1.	Animals that can live on land as well as in water.	Animals that can live in water.
2.	Breathe through gills or lungs.	Breathe through lungs.
3.	They have smooth non-scaly exoskeleton.	Waterproof scaly exoskeleton.
4.	Eggs without covering.	Eggs with hard covering.
5.	Example : frog.	Example : snake, crocodile.

17. What are the differences between animals belonging to the aves group and those in the mammalia group?

Ans :

	Mammalia	Aves
1.	Mammals give birth to their young ones.	Birds lay eggs.
2.	Mammals have only fur or hair.	Birds have feathers.
3.	Mammals have denser bones.	Birds have porous or hollow bones.
4.	Mammals have paws, hands, and hooves.	Birds have wings.
5.	Mammals produce sound using a larynx.	Birds does not produce sounds.
6.	Mammals feed their young ones with milk produced by the mammary glands.	The young birds are fed by the parents regurgitating partially digested food.

## 2. NCERT EXERCISE QUESTIONS

1. What are the advantages of classifying organisms?

Ans :

Advantages of classification :

- Better categorization of living beings based on common characters.
- Easier study for scientific research.
- Better understanding of human's relation and dependency on other organisms.
- Helps in cross breeding and genetic engineering for commercial purposes.

2. How would you choose between two characteristics to

be used for developing a hierarchy in classification?

Ans :

- (a) The character which is of fundamental importance, generally present in large number of organisms is used in raising a higher category.
- (b) The character, generally present in smaller number of organism, is used for raising a lower category.

3. Explain the basis for grouping organisms into five kingdoms.

Ans :

Basis of classification :

- (a) Number of cells–unicellular or multicellular
- (b) Layer of cells
- (c) Presence or absence of cell wall–eukaryotic or prokaryotic
- (d) Mode of nutrition–autotroph or heterotroph
- (e) Level of organization–primitive or advanced

4. What are the major divisions in the plantae? What is the basis for these divisions?

Ans :

Division	Basis of Classification
Thallophyta	Thallus like body
Bryophyta	Body is divided into leaf and stem.
Pteridophyta	Body is divided into root, stem and leaf.
Gymnosperm	Seed bearing, naked seeds
Angiosperm	Seed bearing, covered seeds

5. How are the criteria for deciding divisions in plants different from the criteria for deciding the sub-groups among animals?

Ans :

In plants, basic body structure is a major criteria based on which Thallophytes are different from Bryophytes. Apart from this absence or presence of seeds is another important criteria. Gymnosperms and Angiosperms are further segregated based on if seeds are covered or not. It is clear that it is the morphological character which makes the basis for classification of plants.

In animals, classification is based on more minute structural variations. So, in place of morphology, cytology forms the basis. Animals are classified based on layers of cells, presence or absence of coelom. Further at higher hierarchy animals are classified based on presence or absence of smaller features, like presence or absence of four legs.

6. Explain, how animals in Vertebrata are classified into further sub-groups?

Ans :

Vertebrates are divided into five groups, i.e. Pisces, Amphibia, Reptilia, Ayes and Mammalia on the basis of certain characteristics as follows :

- (a) **Pisces** : Exoskeleton of scales, endoskeleton of bone/cartilage, breathing through gills.
- (b) **Amphibia** : Slimmy skin, larvae with gills, lungs in adults.
- (c) **Reptilia** : Exoskeleton in the form of scales, lay eggs outside water.
- (d) **Ayes** : Exoskeleton of feathers, lay eggs outside water, most of them fly in air.
- (e) **Mammalia** : Exoskeleton of air, external ears present, most of them give birth to young ones.

Add 89056 29969 in Your Class Whatsapp Group to Get All PDF Files.

### 3. NCERT EXEMPLAR

#### Objective Type Questions

1. Find out incorrect sentence :
- (a) Protista includes unicellular eukaryotic organisms.
  - (b) Whittaker considered cell structure, mode and source of nutrition for classifying the organisms in five kingdoms.
  - (c) Both Monera and Protista may be autotrophic and heterotrophic.
  - (d) Monerans have well defined nucleus.
- Ans : (d) Monerans have well defined nucleus.

2. Which among the following has specialized tissue for conduction of water?
- (i) Thallophyta
  - (ii) Bryophyta
  - (iii) Pteridophyta
  - (iv) Gymnosperms
- (a) (i) and (ii)    (b) (ii) and (iii)  
 (c) (iii) and (iv)    (d) (i) and (iv)
- Ans : (c) (iii) and (iv)

3. Which among the following produce seeds?
- (a) Thallophyta    (b) Bryophyta
  - (c) Pteridophyta    (d) Gymnosperms
- Ans : (d) Gymnosperms

4. Which one is a true fish?
- (a) Jellyfish    (b) Starfish
  - (c) Dogfish    (d) Silverfish
- Ans : (c) Dogfish

5. Which among the following is exclusively marine?
- (a) Porifera    (b) Echinodermata
  - (c) Mollusca    (d) Pisces
- Ans : (b) Echinodermata

6. Which among the following have open circulatory system?
- (i) Arthropoda
  - (ii) Mollusca
  - (iii) Annelida

- (iv) Coelenterata  
 (a) (i) and (ii) (b) (iii) and (iv)  
 (c) (i) and (iii) (d) (ii) and (iv)  
**Ans :** (a) (i) and (ii)
- 7.** In which group of animals, coelom is filled with blood?  
 (a) Arthropoda (b) Annelida  
 (c) Nematoda (d) Echinodermata  
**Ans :** (a) Arthropoda
- 8.** Elephantiasis is caused by :  
 (a) Wuchereria (b) Pinworm  
 (c) Planarians (d) Liver flukes  
**Ans :** (a) Wuchereria
- 9.** Which one is the most striking or (common) character of the vertebrates?  
 (a) Presence of notochord  
 (b) Presence of triploblastic condition  
 (c) Presence of gill pouches  
 (d) Presence of coelom  
**Ans :** (a) Presence of notochord
- 10.** Which among the following have scales?  
 (i) Amphibians  
 (ii) Pisces  
 (iii) Reptiles  
 (iv) Mammals  
 (a) (i) and (iii) (b) (iii) and (iv)  
 (c) (ii) and (iii) (d) (i) and (ii)  
**Ans :** (c) (ii) and (iii)
- 11.** Find out the false statement :  
 (a) Ayes are warm blooded, egg laying and have four chambered heart.  
 (b) Ayes have feather covered body, forelimbs are modified as wing and breathe through lungs.  
 (c) Most of the mammals are viviparous.  
 (d) Fishes, amphibians and reptiles are oviparous.  
**Ans :** (d) Fishes, amphibians and reptiles are oviparous.
- 12.** Pteridophyta do not have :  
 (a) Root (b) Stem  
 (c) Flowers (d) Leaves  
**Ans :** (c) Flowers
- 13.** Identify a member of porifera :  
 (a) Spongilla (b) Euglena  
 (c) Penicillium (d) Hydra  
**Ans :** (a) Spongilla
- 14.** Which is not an aquatic animal?  
 (a) Hydra (b) Jellyfish  
 (c) Corals (d) Filaria  
**Ans :** (d) Filaria
- 15.** Amphibians do not have the following :  
 (a) Three chambered heart (b) Gills or lungs  
 (c) Scales (d) Mucus glands  
**Ans :** (c) Scales
- 16.** Organisms without nucleus and cell organelles belong to :  
 (i) Fungi  
 (ii) Protista  
 (iii) Cyano bacteria  
 (iv) Archae bacteria  
 (a) (i) and (ii) (b) (iii) and (iv)  
 (c) (i) and (iv) (d) (ii) and (iii)  
**Ans :** (b) (iii) and (iv)
- 17.** Which of the following is not a criterion for classification of living organisms?  
 (a) Body design of the organism  
 (b) Ability to produce one's own food  
 (c) Membrane bound nucleus and cell organelles  
 (d) Height of the plant  
**Ans :** (d) Height of the plant
- 18.** The feature that is not a characteristic of protochordata?  
 (a) Presence of notochord  
 (b) Bilateral symmetry and coelom  
 (c) Jointed legs  
 (d) Presence of circulatory system  
**Ans :** (c) Jointed legs
- 19.** The locomotory organs of Echinodermata are :  
 (a) Tube feet (b) Muscular feet  
 (c) Jointed legs (d) Parapodia  
**Ans :** (a) Tube feet
- 20.** Corals are :  
 (a) Poriferans attached to some solid support  
 (b) Cnidarians that are solitary living  
 (c) Poriferans present at the sea bed  
 (d) Cnidarians that live in colonies  
**Ans :** (d) Cnidarians that live in colonies
- 21.** Who introduced the system of scientific nomenclature of organisms?  
 (a) Robert Whittaker  
 (b) Carolus Linnaeus  
 (c) Robert Hooke  
 (d) Ernst Haeckel  
**Ans :** (b) Carolus Linnaeus
- 22.** Two chambered heart occurs in :  
 (a) Crocodiles (b) Fish  
 (c) Ayes (d) Amphibians  
**Ans :** (b) Fish

23. Skeleton is made entirely of cartilage in :  
 (a) Sharks (b) Tuna  
 (c) Rohu (d) None of these

Ans : (a) Sharks

24. One of the following is not an Annelid :  
 (a) Nereis (b) Earthworm  
 (c) Leech (d) Urchins

Ans : (d) Urchins

25. The book Systema Naturae was written by :  
 (a) Linnaeus (b) Haeckel  
 (c) Whittaker (d) Robert Brown

Ans : (a) Linnaeus

26. Karl Von Linne was involved with which branch of science?  
 (a) Morphology (b) Taxonomy  
 (c) Physiology (d) Medicine

Ans : (b) Taxonomy

27. Real organs are absent in :  
 (a) Mollusca  
 (b) Coelenterata  
 (c) Arthropoda  
 (d) Echinodermata

Ans : (b) Coelenterata

28. Hard calcium carbonate structures are used as skeleton by :  
 (a) Echinodermata  
 (b) Protochordata  
 (c) Arthropoda  
 (d) Nematoda

Ans : (a) Echinodermata

29. Differentiation in segmental fashion occurs in :  
 (a) Leech (b) Starfish  
 (c) Snails (d) Ascaris

Ans : (a) Leech

30. In taxonomic hierarchy family comes between :  
 (a) Class and Order  
 (b) Order and Genus  
 (c) Genus and Species  
 (d) Division and Class

Ans : (b) Order and Genus

31. 5-Kingdom classification has given by :  
 (a) Morgan (b) R. Whittaker  
 (c) Linnaeus (d) Haeckel

Ans : (b) R. Whittaker

32. Well defined nucleus is absent in :  
 (a) blue green algae (b) diatoms  
 (c) algae (d) yeast

Ans : (a) blue green algae

33. The 'Origin of Species' is written by :  
 (a) Linnaeus  
 (b) Darwin  
 (c) Haeckel  
 (d) Whittaker

Ans : (b) Darwin

34. Meena and Hari observed an animal in their garden. Hari called it an insect while Meena said it was an earthworm. Choose the character from the following which confirms that it is an insect.  
 (a) Bilateral symmetrical body  
 (b) Body with jointed legs  
 (c) Cylindrical body  
 (d) Body with little segmentation

Ans : (b) Body with jointed legs

Download All PDF files from [www.rava.org.in](http://www.rava.org.in).

### Short Answer Questions

35. Write true (T) or false (F) :  
 (a) Whittaker proposed five kingdom classifications.  
 (b) Monera is divided into Archaeobacteria and Eubacteria.  
 (c) Starting from Class, Species comes before the Genus.  
 (d) Anabaena belongs to the kingdom Monera.  
 (e) Blue green algae belong to the kingdom Protista.  
 (f) All prokaryotes are classified under Monera.

Ans :

- (a) True, (b) True, (c) False, (d) True, (e) False, (f) True.

36. Fill in the blanks :  
 (a) Fungi shows \_\_\_\_\_ mode of nutrition.  
 (b) Cell wall of fungi is made up of \_\_\_\_\_  
 (c) Association between blue green algae and fungi is called as \_\_\_\_\_  
 (d) Chemical nature of chitin is \_\_\_\_\_  
 (e) \_\_\_\_\_ has smallest number of organisms with maximum number of similar characters.  
 (f) Plants without well differentiated stem, root and leaf are kept in \_\_\_\_\_  
 (g) \_\_\_\_\_ are called as amphibians of the plant kingdom.

Ans :

(a) saprophytic,	(b) chitin,
(c) lichens,	(d) carbohydrates,
(e) Species,	(f) thallophyta,
(g) Bryophytes	

37. You are provided with the seeds of gram, wheat, rice, pumpkin, maize and pea. Classify them whether they are monocot or dicot.

Ans :

Gram—dicot	Wheat—monocot
Rice—monocot	Pumpkin—dicot
Maize—monocot	Pea—dicot

38. Match items of column A with items of column B.

	Column A		Column B
1.	Naked eye	(a)	Angiosperms
2.	Covered seed	(b)	Gymnosperms
3.	Flagella	(c)	Bryophytes
4.	Marchantia	(d)	Euglena
5.	Marsilea	(e)	Thallophyta
6.	Cladophora	(f)	Pteridophyta
7.	Penicillium	(g)	Fungi

Ans :

	Column A		Column B
1.	Naked eye	(b)	Gymnosperms
2.	Covered seed	(a)	Angiosperms
3.	Flagella	(d)	Euglena
4.	Marchantia	(c)	Bryophytes
5.	Marsilea	(f)	Pteridophyta
6.	Cladophora	(e)	Thallophyta
7.	Penicillium	(g)	Fungi

39. Match items of column A with items of column B :

	Column A		Column B
1.	Pore bearing animals	(a)	Arthropoda
2.	Diploblastic	(b)	Coelenterata
3.	Metameric segmentation	(c)	Porifera
4.	Jointed legs	(d)	Echinodermata
5.	Soft bodied animals	(e)	Mollusca
6.	Spiny skinned animals	(f)	Annelida

Ans :

	Column A		Column B
1.	Pore bearing animals	(c)	Porifera
2.	Diploblastic	(b)	Coelenterata
3.	Metameric segmentation	(f)	Annelida
4.	Jointed legs	(a)	Arthropoda
5.	Soft bodied animals	(e)	Mollusca
6.	Spiny skinned animals	(d)	Echinodermata

40. Classify the following organisms based on the absence/presence of true coelom (i.e., acoelomate, pseudocoelomate and coelomate) : Spongilla, Sea anemone, Planaria, Liver fluke, Wuchereria, Ascaris, Nereis, Earthworm, Scorpion, Birds, Fishes, Horse.

Ans :

Spongilla – Acoelomate,	Sea anemone – Acoelomate
Planaria – Acoelomate,	Liver fluke – Acoelomate
Wuchereria – Pseudocoelomate,	Ascaris – Pseudocoelomate
Nereis – Coelomate,	Scorpion – Coelomate
Earthworm – Coelomate,	Birds, Fishes and Horse – Coelomate

41. Endoskeleton of fishes are made up of cartilage and bone; classify the following fishes as cartilagenous or bony : Torpedo, Sting ray, Dog fish, Rohu, Angler fish, Exocoetus.

Ans :

Torpedo – Cartilagenous,	Sting ray – Cartilagenous
Dog fish – Cartilagenous,	Rohu – Bony
Angler fish – Cartilagenous,	Exocoetus – Bony

42. Classify the following based on number of chambers in their heart :

Rohu, Scoliodon, Frog, Salamander, Flying lizard, King Cobra, Crocodile, Ostrich, Pigeon, Bat, Whale.

Ans :

Rohu, Scoliodon – 2 chambered.

Frog, Salamander, Flying lizard, King Cobra – 3 chambered.

Crocodile, Ostrich, Pigeon, Bat, Whale – 4 chambered.

43. Classify Rohu, Scoliodon, Flying lizard, King Cobra, Frog, Salamander, Ostrich, Pigeon, Bat, Crocodile and Whale into the cold blooded/warm blooded animals.

Ans :

**Cold blooded :** Rohu, Scoliodon, Frog, Salamander, Flying lizard, King Cobra, Crocodile.

**Warm blooded :** Ostrich, Pigeon, Bat, Whale.

44. Name two egg laying mammals.

Ans :

- (i) Echidna,
- (ii) Platypus.

45. Fill in the blanks :

- (a) Five kingdom classification of living organisms is given by \_\_\_\_\_
- (b) Basic smallest unit of classification is \_\_\_\_\_
- (c) Prokaryotes are grouped in Kingdom \_\_\_\_\_
- (d) Paramecium is a protista because of its \_\_\_\_\_

- (e) Fungi do not contain \_\_\_\_\_
- (f) A fungus \_\_\_\_\_ can be seen without microscope.
- (g) Common fungi used in preparing the bread is \_\_\_\_\_
- (h) Algae and fungi form symbiotic association called \_\_\_\_\_

Ans :

(a) Robert Whittaker,	(b) species,
(c) monera,	(d) eukaryotic unicellular, mobile organisms,
(e) chlorophyll,	(f) mushroom,
(g) yeast,	(h) lichens.

46. Give True (T) and False (F) :

- (a) Gymnosperms differ from Angiosperms in having covered seed.
- (b) Non-flowering plants are called Cryptogamae.
- (c) Bryophytes have conducting tissue.
- (d) Funaria is a moss.
- (e) Compound leaves are found in many ferns.
- (f) Seeds contain embryo.

Ans :

- (a) False, (b) True, (c) False, (d) True, (e) True, (f) True.

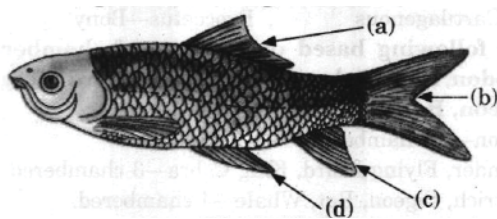
47. Fill in the blanks :

- (a) Bilateral, dorsiventral symmetry is found in \_\_\_\_\_
- (b) Worms causing disease elephantiasis is \_\_\_\_\_
- (c) Open circulatory system is found in \_\_\_\_\_ where coelomic cavity is filled with blood.
- (d) \_\_\_\_\_ are known to have pseudocoelom.

Ans :

- (a) liver fluke, (b) filarial worm, (c) anthropods, (d) Nematodes.

48. Label a, b, c and d given in the figure. Give the function of b.

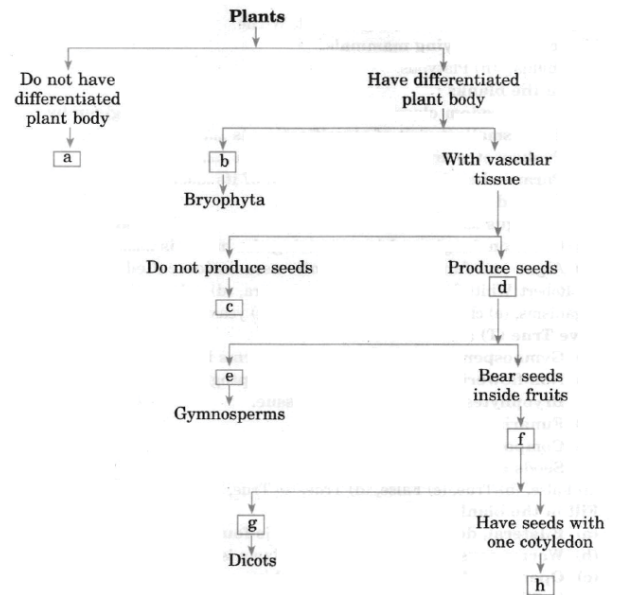


Ans :

- (a) Dorsal fin, (b) Caudal fin, (c) Pelvic fin, (d) Pectoral fin
- Function of Caudal fin – Caudal fin helps in streamlined movement in water.

49. Fill in the boxes given in figure with appropriate characteristics/plant group (s) :

Ans :



Ans :

- (a) Thallophyta,
- (b) Without specialized vascular tissue,
- (c) Pteridophyta,
- (d) Phanerogams,
- (e) Bear naked seeds,
- (f) Angiosperms,
- (g) Have seeds with two cotyledons,
- (h) Monocots

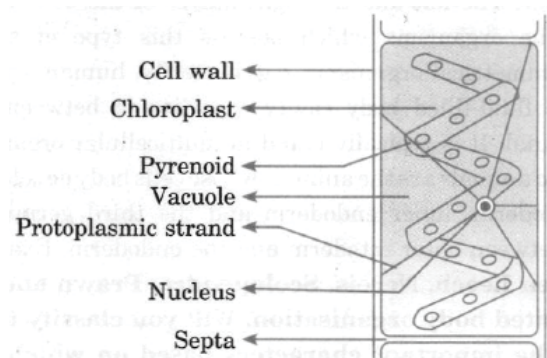
Download All PDF files from www.rava.org.in.

### Long Answer Questions

50. Write names of few Thallophytes. Draw a labelled diagram of Spirogyra.

Ans :

Ulva, Spirogyra, Cladophora, Ulothrix, Chara are the some examples of Thallophyta.

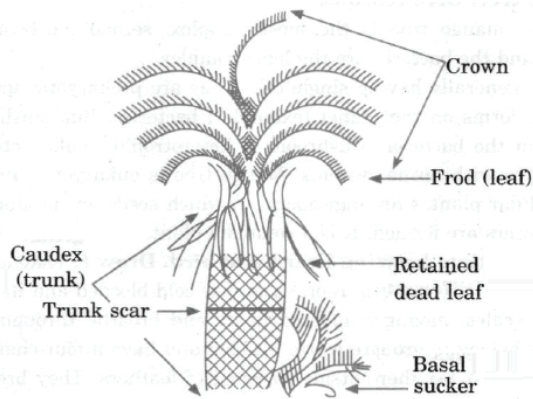


51. Why are Thallophyta, bryophyta and pteridophyta called ‘Cryptogams’ while Gymnosperms and Angiosperms are called ‘phanerogams’? Draw one example of Gymnosperm.

Ans :

Thallophyta, bryophyta and pteridophyta are called ‘Cryptogams’ because the reproductive organs of plants in all these three group is hidden and plants do not bear flowers or seeds. On the other hand ‘Phanerogams’ are flowering and bear seeds. It

includes gymnosperms and angiosperms which have well-differentiated reproductive tissue that finally make seeds. Seeds are the result of the reproductive process. Seeds consist of the embryo along with stored food, which serves for the primary growth of the embryo during germination.



52. Define the terms and give one example of each :

- Bilateral symmetry
- Coelom
- Triploblastic

Ans :

- Bilateral symmetry** : When the body have similar parts fixed around a common central axis. Parts of these animals at any point of radius have similar structure to that of other. The left and the right halves of the body are same in bilateral symmetry. The organisms which possess this type of symmetry are called bilaterally symmetrical organisms, e.g. butterfly, human, crab.
- Coelom** : A coelom is fluid-filled body cavity that lies in between the body wall and alimentary canal. It is typically found in multicellular organisms.
- Triploblastic** : Triploblastic animals are the animals whose cells body develops from three layers : the outer ectoderm, inner endoderm and the third germinal layer mesoderm which is in between outer ectoderm and the endoderm. Example : Tapeworm.

53. You are given Leech, Nereis, Scolopendra, Prawn and Scorpion; and all have segmented body organisation. Will you classify them in one group? If no, give the important characters based on which you will separate these organisms into different groups.

Ans :

All the given organisms do not belong to same group. Leech and Nereis belong to phylum annelida because as their body is bilaterally symmetrical and triploblastic. They have elongated and segmented body and bear lateral appendages for locomotion. They have true body cavity.

Colopendra, Prawn and Scorpion belong to phylum arthropoda as these are bilaterally symmetrical, segmented animals having jointed legs and an open circulatory system.

54. Which organism is more complex and evolved among Bacteria, Mushroom and Mango tree. Give reasons.

Ans :

Among these mango tree is the most complex, second most complex is the mushroom, and the bacteria are the least complex.

Bacteria are generally having single cell. They are prokaryotic and some of the simplest life forms on the planet (example : bacteria). But mushroom is more complex than the bacteria. Mushroom is heterotrophic, eukaryotic and simple thallophyte with no tissue systems. Mango tree is eukaryotic, autotrophic and multicellular plant. It is an angiosperm in which seeds are produced inside the fruit and flowers are formed. It is a complete plant.

55. Differentiate between flying lizard and bird. Draw the diagram.

Ans :

Flying lizard belongs to group reptiles so it is cold blooded and its body covered with scales, having three chambered heart and breathe through lungs, while birds belong to group aves are warm blooded and have a four-chambered heart. They lay eggs. There is an outside covering of feathers. They breathe through lungs.

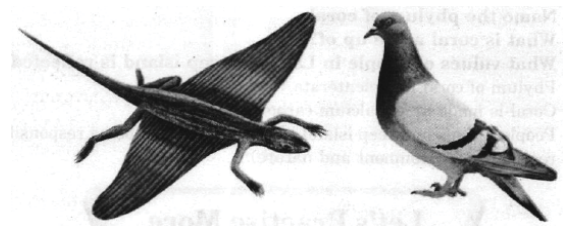


Figure: (a) Flying lizard, (b) Pigeon

56. Write some common features in cat, rat and bat.

Ans :

Bat, rat and cat belong to class Mammalia and have following common features :

- All have notochord at some stage of life cycle.
- Mammals are warm-blooded animals with four-chambered hearts.
- They have mammary glands for the production of milk to nourish their young ones.
- Their skin has hairs as well as sweat and oil glands.
- All the three mammals given above produce live young ones.

57. Why do we keep both snake and turtle in the same class?

Ans :

Both the animals are cold-blooded, have scales and breathe through lungs, they belong to Reptilia group. Most of the animals in this group have three-chambered heart except crocodiles which have four chambered heart. They lay eggs with tough coverings.



A MISSION FOR FREE AND BEST CONTENT FOR ALL

Students don't need to purchase any guide, question bank or sample/model paper from market. All material will be available on this website in the form of free PDFs by 30 September. Website will provide following materials :

- ✓ NCERT Text Book and Solutions
- ✓ Previous Years Chapter-wise Question Bank
- ✓ 20 Solved Sample Paper as per New 2019-2020 Pattern

## Science IX

CLICK ANY CHAPTER

<a href="#">NCERT_Text_1</a>	<a href="#">NCERT_Sol_1</a>	<a href="#">OBJECTIVE_1</a>	<a href="#">QUES_BANK_1</a>
<a href="#">NCERT_Text_2</a>	<a href="#">NCERT_Sol_2</a>	<a href="#">OBJECTIVE_2</a>	<a href="#">QUES_BANK_2</a>
<a href="#">NCERT_Text_3</a>	<a href="#">NCERT_Sol_3</a>	<a href="#">OBJECTIVE_3</a>	<a href="#">QUES_BANK_3</a>
<a href="#">NCERT_Text_4</a>	<a href="#">NCERT_Sol_4</a>	<a href="#">OBJECTIVE_4</a>	<a href="#">QUES_BANK_4</a>
<a href="#">NCERT_Text_5</a>	<a href="#">NCERT_Sol_5</a>	<a href="#">OBJECTIVE_5</a>	<a href="#">QUES_BANK_5</a>
<a href="#">NCERT_Text_6</a>	<a href="#">NCERT_Sol_6</a>	<a href="#">OBJECTIVE_6</a>	<a href="#">QUES_BANK_6</a>
<a href="#">NCERT_Text_7</a>	<a href="#">NCERT_Sol_7</a>	<a href="#">OBJECTIVE_7</a>	<a href="#">QUES_BANK_7</a>
<a href="#">NCERT_Text_8</a>	<a href="#">NCERT_Sol_8</a>	<a href="#">OBJECTIVE_8</a>	<a href="#">QUES_BANK_8</a>
<a href="#">NCERT_Text_9</a>	<a href="#">NCERT_Sol_9</a>	<a href="#">OBJECTIVE_9</a>	<a href="#">QUES_BANK_9</a>
<a href="#">NCERT_Text_10</a>	<a href="#">NCERT_Sol_10</a>	<a href="#">OBJECTIVE_10</a>	<a href="#">QUES_BANK_10</a>
<a href="#">NCERT_Text_11</a>	<a href="#">NCERT_Sol_11</a>	<a href="#">OBJECTIVE_11</a>	<a href="#">QUES_BANK_11</a>
<a href="#">NCERT_Text_12</a>	<a href="#">NCERT_Sol_12</a>	<a href="#">OBJECTIVE_12</a>	<a href="#">QUES_BANK_12</a>
<a href="#">NCERT_Text_13</a>	<a href="#">NCERT_Sol_13</a>	<a href="#">OBJECTIVE_13</a>	<a href="#">QUES_BANK_13</a>
<a href="#">NCERT_Text_14</a>	<a href="#">NCERT_Sol_14</a>	<a href="#">OBJECTIVE_14</a>	<a href="#">QUES_BANK_14</a>
<a href="#">NCERT_Text_15</a>	<a href="#">NCERT_Sol_15</a>	<a href="#">OBJECTIVE_15</a>	<a href="#">QUES_BANK_15</a>