Diversity in Living Organisms

Periodic Test

Q.1. Which division among plants has the simplest organisms?

Answer: Amongst different divisions of plants **thallophyta** is one division which has the simplest forms. It is the lowest group of plants. The body of members of thallophyta is generally thalloid.

Some members of thallophyta include ulothrix, spirogyra, cladophora, etc.

Q.2. What is the basis for grouping organisms into five kingdoms?

Answer: All the organisms are divided into five kingdoms which are Monera, Protista, Fungi, Plantae and Animilia. The bases for classifying all organisms into five groups are:

(i) Type of cellular organization: whether the organism is prokaryotic or eukaryotic

(ii) Body organization: whether the organism is multicellular or unicellular

(iii) Mode of obtaining food: whether the organism is autotrophic of heterotrophic

(iv) Presence or absence of cell wall

Q.3. On what basis are plants and animals put into different categories?

Answer:

There are many differences between plants and animals but they are placed in different categories on the basis of one important character:

• Mode of nutrition: Plants are autotrophic whereas animals are heterotrophic.

The other differences are:

• Plant cells have a cell wall whereas animal cells don't.

• Plant cells have a big central vacuole whereas animal cells have one or more smaller vacuoles.

Q.4. How many chambers are present in the heart of fishes and frogs?

Answer: Fishes: The heart of fishes has **two chambers, an auricle and a ventricle**. The deoxygenated blood enters the auricle and is transported to ventricle from where it reaches the gills for the process of oxygenation. From here the blood is circulated in the body. This is an example of single circulation where the blood crosses the heart only once.

Frogs: Amphibians have a **three chambered heart, two auricles and one ventricle.** This means that the oxygenated and deoxygenated blood gets mixed up and causes an insufficient supply of oxygen to body cells.

Q.5. What is meant by biodiversity?

Answer: The variety of plants, animals and other species on the Earth or in a particular habitat is known as biodiversity. Biodiversity is used to measure the health of a particular area, to check the condition of a particular species.

Q.6. Give Reasons for the Following:

Why do we classify organisms?

Answer: Classification of organisms is done to **make their study simpler and easier.** Organisms are classified on many bases like presence or absence of cell wall, their nature i.e. prokaryotic and eukaryotic, their habitat, etc.

Organisms are classified into 5 kingdoms, which are, Monera, Protista, Fungi, Plantae and Animalia.

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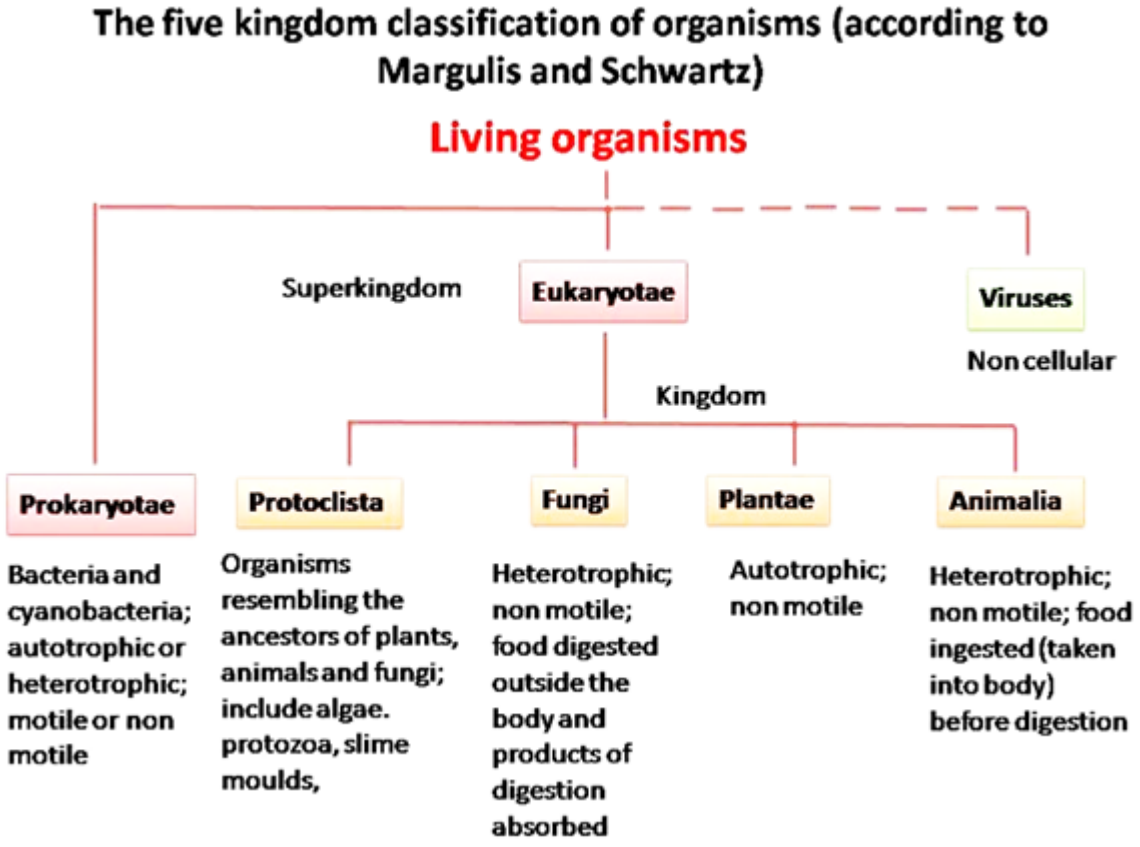


Q.7. Give Reasons for the Following:

Why fungi and bacteria are considered as plants even though they do not have chlorophyll?

Answer: Fungi and bacteria are not classified as plants. They exist in a different kingdom. But these do work on preparing food via the process of photosynthesis.

Q.8. Give Reasons for the Following:

Why bryophytes and pteridophytes grow in moist and shady places?

Answer: Both bryophytes and pteridophytes are small and delicate plants which reproduce by spore formation. Spore formation is optimum at lower temperatures. So, bryophytes and pteridophytes grow in moist and shady places.

Note: Bryophytes are also known as the amphibians of the plant kingdom as they need water to complete their life cycle.

Q.9. Give Reasons for the Following:

Why whales are not grouped in the fishes?

Answer: Whales are not included in the class pieces (fishes) and considered a part of **class Mammalia** because of many reasons.

• The main characteristic of the member of class Mammalia is the **presence of the mammary glands.** Whales have mammary glands and other fishes do not, hence, whales are kept in class Mammalia.

• Whales are **viviparous** (give birth to young ones) as other mammals whereas pieces are oviparous (lay eggs).

• Whales possess **lungs for respiration** as other mammals whereas fishes have gills.

Q.10. Give Reasons for the Following:

Why are local names not sufficient to recognize the organisms?

Answer: Local or vernacular names are not sufficient as there are different languages prevalent in different parts of the world and if we name any plant or animal according to

the local language, no one from another part of the country, forget the world, would be able to understand it. So to solve this problem scientists came up with scientific naming in which all the plants and animals are named in the Latin language.

Q.11. Differentiate between primitive and advanced organisms.

Answer:

	Primitive Organisms		**Advanced Organisms**
1.	The organisms that have ancient body designs i.e their body organs have not evolved.	1.	The organisms that have their acquired body designs.
2.	The primitive organisms have a simple body structure	2.	The advanced organisms have a complex body structure.
3.	Example - Trichoplax adhaerans This is the most primitive of the multicellular organism	3.	Example, amoeba is an advanced organism.

Q.12. How are pteridophytes different from the phanerogams?

Answer: Differences between pteridophytes and phanerogames are as follows:

	PTERIDOPHYTA		**PHANEROGAMES**
1.	They do not have seeds	1.	Seeds are present
2.	Spores present for reproduction	2.	Seeds present for reproduction
3.	Flowers absent	3.	Flowers present
4.	Less developed vascular system present	4.	Well-developed vascular system present

Q.13. Give differences between aves and mammals?

Answer: The differences between the members of aves and mammalia are as follows:

	AVES		**MAMMALIA**
1.	As birds fly, they have hollow bones	1.	Mammalian bones are dense
2.	Birds lay eggs	2.	Mammals give birth to young ones
3.	Birds have feathers	3.	Mammals have either fur or hair

Q.14. Differentiate between amphibians and reptiles.

Answer: The differences between the members of amphibia and reptilia are as follows:

	AMPHIBIANS		REPTILES
1.	Body is slimy	1.	Body is dry and scaly
2.	Shell-less eggs present	2.	Eggs have a hard shell
3.	Larval stages present	3.	No larval stages present

Q.15. How do poriferan animals differ from coelenterate animals?

Answer: The differences between the members of porifera and coelentrata are as follows:

	PORIFERA		COELENTRATA
1.	Cellular level of organization present	1.	Tissue level of organization present
2.	A vast number of pores present on the body	2.	The single opening present which serves as mouth as well as anus
3.	Body is sessile and appendages absent	3.	Body sessile as well as freely moving. Appendages present in the form of tentacles.

Q.16. How do annelid animals differ from arthropods?

Answer: The differences between the members of Annelida and arthropods are:

	ANNELIDA		ARTHROPODA
1.	No distinct head present	1.	Body divided into head, thorax, and abdomen
2.	Exoskeleton is absent	2.	Chitinous exoskeleton present

Q.17. What is the criterion for classification of organisms as belonging to kingdom Monera?

Answer: The main criterion for classification of organisms as belonging to kingdom monera is **'type of cellular organization',** that is, whether the cell is prokaryotic or eukaryotic.

Prokaryotic cells do not have any double membrane bound structure, like the nucleus, chloroplasts, mitochondria, etc. The ribosomes present are 70s, different from that of eukaryotic cells.

Q.18. What are the advantages of classifying organisms?

Answer: Classification of organisms is done to **make their study simpler and easier.** Organisms are classified on many bases like presence or absence of cell wall, their nature i.e. prokaryotic and eukaryotic, their habitat, etc.

The major characteristics considered for classifying all organisms are:

- Type of cellular organization: whether the organism is prokaryotic or eukaryotic
- Body organization: whether the organism is multicellular or unicellular
- Mode of obtaining food: whether the organism is autotrophic of heterotrophic
- Presence or absence of cell wall

Q.19. How would you choose between two characteristics to be used for developing a hierarchy in classification?

Answer: Before developing a hierarchy we need to finalise the elements which will define the basis for classification.

Based on these, the common characteristics are used for forming sub-groups.

For example, plants differ from animals in their body design, process of food formation i.e. photosynthesis, etc. But, the main classification between plants & animals is based on the property of locomotion because plants cannot move but animals can. Hence, locomotion is considered as the fundamental characteristic for distinguishing between plants and animals.

Q.20. What are the major divisions in the Plantae? What is the basis for these divisions?

Answer: Some plants might have a thalloid body whereas some might have plant body differentiated into true roots, stem, and leaves. Some might have a naked seed whereas some might have seeds enclosed in a fruit. Therefore, Kingdom Plantae is divided into five major divisions which are **Thallophyta, Bryophyta, Pteridophyta, Gymnosperms, and Angiosperms.** They all are different from each other on a certain basis.

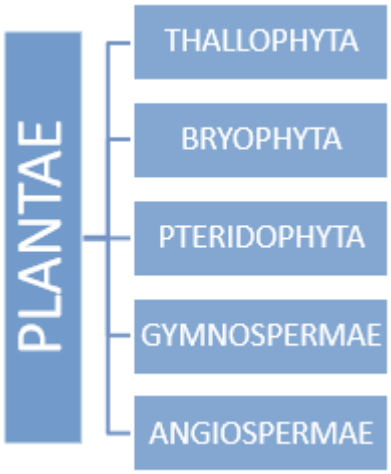
The bases of these divisions are:

(i) Presence or absence of distinct organs like whether the plant body is differentiated into true root, stem, and leaf or not.

(ii) Presence or absence of distinct and differentiated tissues, which can carry food (phloem) and water (xylem).

(iii) Presence or absence of seeds.

(iv) Whether the seeds are enclosed within fruits or not.



Q.21. How scientific name of an organism is written? What types of conventions are followed while writing the scientific names?

Answer: Binomial system of nomenclature, proposed by Carolus Linnaeus, is the most accepted system of scientific naming which is practiced currently. This type of naming consists of two words taken from the Latin origin, and if the word is not available in the Latin language then it is latinised.

There are four conventions which are followed while writing the scientific names. They are as follows:

(i) The first word out of the two words will be the **genus** whereas the **second word** would represent the **species.**

(ii) The name of the **genus should start with the capital letter** and the name of the genus should start with the small letter

(iii) The **scientific name must be italicized,** when printed

(iv) **The scientific name must be separately underlined** when it is hand written.

Example: It can be explained with the help of an example.

Panthera leo

• It is the common name of the lion.

• In this, the first word represents its genus - Panthera, while the second word represents the species - Leo.

• The scientific name has been italicized.

Q.22. Give two salient features or any unique feature, each of the following division or phylum:

A. Division Thallophyta.

B. Division Pteridophyta.

C. Division Gymnosperms.

D. Phylum Coelenterata.

E. Phylum Annelida.

F. Phylum Arthropoda.

G. Phylum Protochordata.

H. Phylum Vertebrata.

Answer: (A). Division Thallophyta

• The plant body is thalloid are not divided into true root, stem or leaves

• Conducting elements are absent in thallophytes

(B) Division Pteridophyta

• Pteridophyta are first true land plants

• They are seedless, vascular cryptogams

(C) Division gymnosperms

• They have naked seeds, that is, its seeds are not covered by fruit. Formation of the flower is absent.

• The seeds are pollinated by wind

(D) Phylum Coelenterata

• Presence of cnidoblast cells, therefore, phylum also known as cnidaria

• All the members of phylum Coelenterata are aquatic, mostly marine.

(E) phylum Annelida

• Body is metamerically segmented

• First Phylum having a true coelom

(F) phylum Arthropoda

• Animals having jointed appendages

• Largest and most successful phylum on the Earth

(G) subphylum protochordate

• Pharynx perforated by Gill slits.

• A post-anal tail is present. Brainbox is absent.

(H) subphylum Vertebrata

• The notochord is replaced by a cartilaginous or bony vertebral column in the adult

• Presence of dorsal hollow nerve cord

Comprehensive Exercises (MCQ)

Q.1. Hair-like cilia or whip-like flagella for locomotion are present in Kingdom:

A. Monera

B. Protista

C. Fungi

D. Plantae

Answer: Protista is unicellular, eukaryotic organisms which have a heterotropic mode of nutrition. Some of the members of kingdom Protista are paramecium, euglena, etc.

Q.2. The branch of biology which deals with the principles and practice of classification of plants and animals is:

A. Taxonomy

B. Morphology

C. Ecology

D. Geology

Answer: The word taxonomy is obtained from a Greek word "taxis" which means arrangement. Therefore, taxonomy is the branch of biology that deals with the principles and practice of classification of plants and animals.

Q.3. The organisms having ‘pores’ all over the body and a canal system for bringing in food and oxygen belongs to phylum:

A. Coelenterata

B. Porifera

C. Annelida

D. Echinodermata

Answer: The phylum Porifera got its name from the word 'pores'. The body of all the members of Porifera is porous. The important characteristic of this phylum is the presence of different types of canal systems which help in nutrition, reproduction, and excretion.

Q.4. All organisms that are similar enough to breed and perpetuate are called:

A. Genera

B. Phylum

C. Family

D. Species

Answer: Species can be described as a group of closely related organisms that are similar to each other and are usually capable of interbreeding and producing fertile offspring.

Q.5. Which among the following have an 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

Answer: The open circulatory system is a type of circulatory system in which blood is pumped by the heart directly into the body cavities, where tissues are surrounded by the blood and not into blood vessels.

Example of animal groups having an open circulatory system are arthropods and mollusks.

Q.6. In which group of animals, coelom is filled with blood?

A. Arthropoda

B. Annelida

C. Nematoda

D. Echinodermata

Answer: Coelom is filled with blood in case of animal groups having an open circulatory system. The open circulatory system is a type of circulatory system in which blood is pumped by the heart directly into the body cavities, where tissues are surrounded by the blood and not into blood vessels.

Q.7. Elephantiasis is caused by:

A. Wuchereria

B. Pinworm

C. Planarians

D. Liver flukes

Answer: Elephantiasis also known as Filariasis, is caused because of the filarial worm, Wuchereri bankrofti. Infection occurs when filarial parasites are transmitted to humans through mosquitoes. The disease causes swelling of the scrotum, legs, or breasts.

Q.8. Which one is the most striking or (common) character of the vertebrates?

A. Presence of notochord

B. Presence of a triploblastic condition

C. Presence of gill pouches

D. Presence of coelom

Answer: On the basis of the presence or absence of notochord Kingdom Animalia is divided into - non chordates and chordates. Vertebrata is included in chordates on the basis of the presence of a notochord, which in the adult stage is replaced by a Bony or cartilaginous vertebral column.

Q.9. Find the 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

D. Monerans have well-defined nucleus

Answer: Kingdom Monera includes all the prokaryotes. Prokaryotes have a primitive nucleus, that is, without a nuclear membrane, 70s type or ribosomes, and no double membrane-bound organelle.

Example: Bacteria

Q.10. Which among the following has a specialised 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 ii

Answer: Out of the given four, only Pteridophytes and gymnosperms have a well-defined tissue for conduction of water and food. The vascular tissue specialized for the conduction of water is known as xylem and the tissue specialized for the conduction of food is known as phloem.

Q.11. 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)

Answer: Pisces and reptiles have scales which act as protection for their body. A scale is a rigid small plate on the body of fishes or reptiles that has many functions. The first is to protect them from enemies or predators. They also decrease water friction so that the animal can move easily in the water.

Q.12. Find out the false statement:

A. Aves are warm-blooded, egg-laying and have four-chambered heart

B. Aves have a feather covered body, fore limbs are modified as a wing and breathe through lungs

C. Most of the mammals are viviparous

D. Fishes, amphibians, and reptiles are oviparous

Answer: Though most of the fishes, amphibians, and reptiles are oviparous there are a few exceptions to this. There are a few fishes, amphibians and reptiles which are viviparous.

• Sharks, stingrays, eagle rays, and giant rays are viviparous fish.

• Few species of frogs, toads, and salamanders are viviparous.

• Skink, a type of lizard is also viviparous.

Q.13. The locomotory organs of Echinodermata are:

A. Tube feet

B. Muscular feet

C. Jointed legs

D. Parapodia

Answer: Tube feet are the small projections on the oral sources of the echinoderm which perform many functions.

The major function of the tube feet is movement. Other than movement, they also help in feeding and respiration.

Q.14. Corals are:

A. Poriferans attached to some solid support

B. Cnidarians, that are solitary living

C. Poriferans present at the seabed

D. Cnidarians that live in colonies

Answer: Reefs are formed of colonies of coral polyps (a sessile form of members of phylum Cnidaria) held together by calcium carbonate. They are as hard as a rock.

The Great Barrier Reef is the world's largest coral reef system. The reef is located in the Coral Sea, off the coast of Queensland, Australia.

Q.15. Which among the following produce seeds?

A. Thallophyta

B. Bryophyta

C. Pteridophyta

D. Gymnosperms

Answer: Gymno= naked; sperms= seed

This is the first division of kingdom Plantae which produces seeds. Gymnosperms don't produce flower and hence, the seeds produced are not enclosed in a fruit. The seeds produced are usually in the form of cones.

Q.16. Which one is a true fish?

A. Jellyfish

B. Starfish

C. Dogfish

D. Silverfish

Answer: Out of the given four, the only dogfish is the real fish, all others belong to different phyla.

Jellyfish - common name of Aurelia (Coelenterata)

Starfish - common name of Asteria (Echinodermata)

Silverfish- a small insect in the order Zygentoma (Arthropoda)

Q.17. Which among the following is exclusively marine?

A. Porifera

B. Echinodermata

C. Mollusca

D. Pisces

Answer: Apart from Ctenophora, Echinodermata is one of the phyla which is exclusively marine. All the members of phylum Echinodermata are aquatic as well as marine.

Q.18. 5-Kingdom classification was given by:

A. Morgan

B. R. Whittaker

C. Linnaeus

D. Haeckel

Answer: RH Whittaker was the scientist who gave 5 Kingdom classification. He divided all the organisms into Monera, Protista, fungi, Plantae and animilia.

Q.19. The well-defined nucleus is absent in:

A. Blue-green algae

B. Diatoms

C. Algae

D. Yeast

Answer: Blue-green algae (BGA) also known as cyanobacteria, is a member of kingdom Monera. Monerans are prokaryotic and lack a well-defined nucleus. They also lack double membrane-bound organelles. Ribosomes present in bacteria as of 70s type.

Q.20. The 'Origin of Species' is written by:

A. Linnaeus

B. Darwin

C. Haeckel

D. Whittaker

Answer: The book 'Origin of Species' was written by Charles Darwin, which was published on 24 November 1859. It gave evidence on evolution and suggested what had caused evolution to happen. The main concept of the book was the origin of species by means of natural selection.

Q.21. Skeleton is made entirely of cartilage in:

A. Sharks

B. Tuna

C. Rohu

D. None of these

Answer: Some fishes entirely different from others have a skeleton made up of cartilage and not bones. This helps the cartilaginous fishes such as sharks to reduce their weight and making it easier for them to swim at faster speeds with less energy being consumed.

Q.22. One of the following is not an Annelid?

A. Nereis

B. Earthworm

C. Leech

D. Urchins

Answer: Out of the above mentioned four, urchins are not the members of phylum Annelida; instead, they are the members of class Echinoidea, phylum Echinodermata. They are usually small, round and spiny in nature.

Q.23. The book ‘Systema Naturae’ was written by:

A. Linnaeus

B. Haeckel

C. Whittaker

D. Robert Brown

Answer: The book 'Systema Naturae' was written by Carolus Linnaeus in 1735. The book marked the beginning of zoological nomenclature.

Q.24. The animals having blood-filled coelomic cavity belongs to phylum:

A. Arthropoda

B. Mollusca

C. Annelida

D. Echinodermata

Answer: The blood is in the coelom of animals having an open circulatory system. In such type of circulatory system, blood flows into a body cavity (coelom) and not in the blood vessels.

Q.25. The animals having two-chambered heart belongs to the class?

A. Amphibia

B. Reptilia

C. Pisces

D. Aves

Answer: Fishes have two-chambered heart, the upper one is the auricle whereas the lower one is the ventricle. From the body the deoxygenated blood is carried to the auricle then from here it is transported to the ventricle and then to the gills for oxygenation.

Q.26. The system of scientific naming was introduced by:

A. Ernst Haeckel

B. Robert Whittaker

C. Carl Woese

D. Carolus Linnaeus

Answer: Carolus Linnaeus introduced the Binomial Nomenclature system of scientific naming. According to the Binomial Nomenclature system, the scientific name of the organism consists of two words, the first one is the name of the genus where are the second one is the name of the species. The names are latinised. The scientific name is italicized when printed and separately underlined when handwritten.

Q.27. Organisms without nucleus and cell organelles belong to:

(i) Fungi

(ii) Protista

(iii) Cyanobacteria

(iv) Archaebacteria

A. (i) and (ii)

B. (iii) and (iv)

C. (i) and (iv)

D. (ii) and (iii)

Answer: Cyanobacteria and archaebacteria both belong to the Kingdom Monera and the members of Kingdom Monera are prokaryotes, that is, they have a primitive nucleus, no membrane bound organelles and ribosomes of 70s type.

Q.28. Which of the following is not a criterion for classification of living organisms?

A. The body design of the organism

B. Ability to produce one's own food

C. Membrane-bound nucleus and cell organelles

D. The height of the plant

Answer: There are a few bases for classification of organisms into five different kingdoms that are, monera, protista, fungi, Plantae and animilia.

(i) Type of cellular organization

(ii) Body organization

(iii) Mode of obtaining food

(iv) Presence or absence of cell wall

Q.29. The feature that is not a characteristic of protochordate?

A. Presence of notochord

B. Bilateral symmetry and coelom

C. Jointed legs

D. Presence of circulatory system

Answer: Jointed appendages are the characteristic feature of the members of Phylum Arthropoda. Arthro =jointed; poda=legs. All the members of Phylum Arthropoda have jointed appendages.

Q.30. Real organs are absent in:

A. Mollusca

B. Coelenterata

C. Arthropoda

D. Echinodermata

Answer: Coelentrata is the second phylum of kingdom animilia which do not contain any real organ. The body of the organism is diploblastic, acoelomate. All the members of phylum coelentrata are aquatic.

Q.31. Hard calcium carbonate structures are used as a skeleton by:

A. Echinodermata

B. Protochordata

C. Arthropoda

D. Nematoda

Answer: They have hard calcium carbonate structure which they use as skeleton. They have a spiny body.

Q.32. Pteridophyta do not have:

A. Root

B. Stem

C. Flowers

D. Leaves

Answer: Pteridophyta is the first land plants having true roots, stem and leaves but they lack flowers. The presence of flowers is the characteristic feature of division Angiospermae. Because of the presence of flowers, they are also known as phenerogames.

Q.33. Identify a member of porifera:

A. Spongilla

B. Euglena

C. Penicillium

D. Hydra

Answer: Spongilla is a type of freshwater sponge which has a water canal system. Numerous pores are also present in the body of the organism.

Q.34. Which is not an aquatic animal?

A. Hydra

B. Jellyfish

C. Corals

D. Filaria

Answer: Out of the given organisms hydra, jellyfish and corals all belong to the phylum Coelentrata whereas filaria is a member of phylum nemathelminthes. Filarial worm are parasitic in nature.

Q.35. Amphibians do not have the following:

A. Three chambered heart

B. Gills or lungs

C. Scales

D. Mucus glands

Answer: Amphibians such as frogs, toads or salamanders have a three chambered heart (having two auricles and one ventricle), mucus glands which make the body slimy and gills or lungs present for respiration.

Scales are absent in amphibians.

Q.36. In taxonomic hierarchy family comes between:

A. Class and Order

B. Order and Genus

C. Genus and Species

D. Division and Class

Answer: ● The hierarchy is as follows

- Kingdom
- Phylum
- Class
- Order
- Family
- Genus
- Species

So we can clearly see that the taxonomic hierarchy family comes between order and genus.

Q.37. Plants that do not have well- differentiated body design fall into the group called:

A. Pteridophyta

B. Thallophyta

C. Bryophyta

D. Gymnosperms

Answer: The body of the members belonging to division thallophyta is thalloid, that is, the members do not have differentiated body structures like root, stem or leaves.

Q.38. The common name for Fasciola hepatica and Taenia solium are:

A. Liver fluke and Tapeworm

B. Liver fluke and Roundworm

C. Liver fluke and Pinworm

D. Roundworm and Tapeworm

Answer: The common names for the flat worms Fasciola hepatica and Taenia solium are liver fluke and tapeworm respectively.

The body of both the organisms is flat and the animals are parasitic in nature.

Q.39. The phylum in which organisms contain pseudocoelom is:

A. Platyhelminthes

B. Annelida

C. Arthropoda

D. Nematoda

Answer: Pseudocoelom is the type of coelom present in the members of phylum Nemathelminthes/ Aschelminthes. In these organisms the coelom is present in the form of packets or pouches.

Q.40. Sehaj and Sidak observed an animal in their garden. Sehaj called it an insect while Sidak 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

Answer: The characteristic feature of the animals belonging to Phylum arthropoda is the presence of jointed appendages. Arthro=jointed; poda=appendages

Comprehensive Exercises (T/F)

Q.1. Write true or false for the following statements:

Cryptogame means those with open reproductive organs.

Answer: False

Cryptogames do not means plants having open reproductive organs whereas it is the division of kingdom plantae which contains plants having naked seeds.

Q.2. Write true or false for the following statements:

Plants with well-differentiated reproductive tissues that ultimately make seeds are called pteridophytes.

Answer: False

Pteridophytes do not produce seeds. Production of seed is the feature of division gymnospermae and division angiospermae.

Q.3. Write true or false for the following statements:

Thallophytes are called the amphibians of the plant kingdom.

Answer: False

Thallophyta not called amphibians of the plant Kingdom whereas members of division Bryophyta are known as the amphibians of the plant Kingdom because they need water for reproduction.

Q.4. Write true or false for the following statements:

Seeds consist of the embryo along with stored food, which serves for the initial growth of the embryo during germination.

Answer: True

Along with the embryo, stored food is also present in the seed which helps in the initial growth of embryo during germination of the seed.

Q.5. Write true or false for the following statements:

The plants of the Angiosperm group bear naked seeds.

Answer: False

Angiosperms do not bear naked seeds instead angiosperms bear covered seeds (seeds enclosed in flower and then in the fruit) whereas naked seed is the property of plants belonging to division gymnospermae.

Q.6. Write true or false for the following statements:

Gymnosperms are usually perennial, evergreen and woody.

Answer: True

Gymnosperms are the tall trees having well developed tissues for the conduction of water, minerals and food. Because of this ability they are usually perennial, evergreen and woody.

Q.7. Write true or false for the following statements:

Cotyledons represent a bit of pre- designed plant in the seed.

Answer: True

Cotyledons are a part of seed which represent a bit of pre-designed plant in the seed. On the basis of number of cotyledons present in the seed, the plant can be categorised as monocot or dicot.

Q.8. Write true or false for the following statements:

Platyhelminthes are either free living or parasitic.

Answer: True

Platyhelminthes or flatworms are usually parasitic in nature but they can also be free living.

Free living flatworm: turbellaria

Parasitic flatworm: liver fluke, tapeworm

Q.9. Write true or false for the following statements:

The animals belonging to phylum Nematoda contain only tissues and no real organs.

Answer: True

The animals belonging to Phylum nematoda contains only the tissues and no real organs. The tissues behave as organs which perform different functions like excretion, respiration, nutrition, etc.

Q.10. Write true or false for the following statements:

The animals belonging to phylum Mollusca have a peculiar water-driven tube system that they use for moving around.

Answer: False

Most of the animals belonging to phylum **mollusca** have a muscular organ for movement which is known as **'foot'.**

Presence of water driven tube feet for movement is the characteristic feature of animals belonging to phylum echinodermata.