

First year Biology complete notes

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CHAPTER 10

ANIMAL KINGDOM

PORIFERA

Multicellular animals having pores

OSTIA

The pores in the body are called ostia

SPICULES

The skeleton of sponges is made up of spicules

CHANOCTES

Special cells which make the body of porifera

GEMMULE FORMATION

Internal budding in sponges

CNIDARIA

Multicellular animals having coelom

DIPLOBLASTIC

Having two germ layers i.e Ectoderm and Endoderm

TENTACLES

Finger like structures surrounding mouth. They help in capturing food.

CENIDOBlast

Special cells which make the body of animals. The phylum is named after these cells.

MESOGLOEA

Since the animals are diploblastic, so they do not have mesoderm. The mesoderm is converted into mesogloea.

POLYP

The sessile (attached) form of animal

MEDUSA

The motile (free swimming) form of animal

GASTROZOIDS

Body parts which take food material

GONZOIDS

Body parts which take part in reproduction

DACTYLOZOIDS

They are sensory parts

POLYMORPHISM

Animal which represents itself in more than one morphological form i.e sessile and motile

CYNEA

The largest jelly fish having 4 meter body diameter and 30 meters long tentacles

PLANULA LARVAE

The larvae of jelly fish

PLATYHELMITHS

Multicellular animals with fat body

TRIPLOBLASTIC

Animals having three germinal layers. i.e. ectoderm, mesoderm and endoderm

CESTODES

Animals having segmented body.e.g. **Tapeworm**

COELOMATES

Animals having true body cavity e.g. **Hydra**

A-COELOMATE

Animals having no coelom.e.g. **Tapeworm**

PSEUDOCOELOMATES

Animals having false coelom.e.g. **Ascaris**

FLAME CELLS

Special cells which help in excretion

PROTONEPHRIDIA

Refers to flame cells

NEPHRIDIOPORES

Pores on body surface where from waste products are removed

OSMOREGULATION

The removal of extra amount of water from body.

This mechanism is must for water animals.

TURBELLARIA

A class of free living platyhelminths.e.g. **Planaria**

TREMATODA

A class of parasitic flukes.e.g. **Liver fluke**

FASCIOLA HEPATICA

Biological name of liver fluke, which cause Fascioliasis disease in sheep and goat.

ROGLOTTIDS

The segments of tape worm etc.

NEMATODES
Multicellular rounded animals

SPECIES

10,000 Species are identified

PSEUDOCOELOM

Having false cavity

ASCARIS

A popular parasite of children intestine

ANNELIDA
A phylum of segmented worms

SEPTA

Internal division of body

SOMITES

Segments of body

METAMERES

Same as above

HOMONOMOUS METAMERISM

Similar shape of segments as in Earthworm

HETERONOMOUS METAMERISM

Different shape of segments as in arthropods

SETAE

Small holes at the base of body with which the earth worm grips with earth. They help in locomotion

HYDROSTATIC SKELETON

A type of skeleton made of fluids

CLOSED CIRCULATORY SYST

A system in which blood in vessels

NEPHRIDIA

A tube which helps in excretion

TROCHOPHORE LARVAE

Larvae of annelids

NERIES

The only annelid with legs called parapodia

LEECH

The medicinal animal in this phylum. It is used to suck the diseased blood

MOLLUSCA
Animals which are mostly covered with shell

GIANT SQUIDS

The largest invertebrate animals

SCAPHOPODA

A typical type of shell which is called tooth shell

PEARL

Formation of pearl due to calcium carbonate material from epithelial layer

SIPHON

Part of foot used for locomotion

ARTHROPODA

Phylum of animals with jointed body and legs

EXOSKELETON

The skeleton found on body surface. It is mainly formed by chitin protein

HAEMOCOEL

The colorless blood in arthropods

SPIRACLES

Openings on body where from gases exchange takes place. Spiracles help in respiration

TRACHIA

The wide tubes which act as lungs in insects

BOOK LUNGS

Same as above

TRACHIOLES

The branches of trachea which distribute oxygen to whole body

MELPIGHIAN TUBULES

The structures present at the junction of mid gut and hindgut. They help in excretion

TELSON

The tail end of Scorpion is called Telson

ARACHNIDA

A group of animals having 8 legs. **e.g. spider**

HEXAPODA

Animals having six legs are called hexapoda
e.g. Insects

PTERIDOGOTA

Insects with wings. **e.g. Mosquito**

APTERIDOGOTA

Wingless insects. **e.g. Lice**

EHINODERMATA

Multicellular marine animals

TUBE FEET

Locomotary organ in star fish

WATER VASCULAR SYSTEM

A system in which water moves the animals

PICES

Multicellular fishes

AGNATHA

Jaw less fishes. e.g. Lampreys

CHONDRIHYTES

Cartilaginous fishes. e.g. Sharks

OSTICHYTES

Bony fishes. e.g. Salmon

CYCLOSTOMES

The most primitive fishes. e.g. Lampreys

AIR BLADDER

A chamber in fishes which help in respiration.e.g. Dolphin etc.

AMPHIBIA

Animals living in water and on land

ANURA

Having no tail. e.g. Frog

URODELA

Having tail. e.g. Salamander

APODA

Limbless (having no legs)

HYBERNATOIN

Winter rest in mud or any where else

AESTIVATION

Summer rest

REPTILES

The creeping animals

TURTLE

A reptile, which lives in water

TORTOISE

A similar animal, which lives on land

COROCCODILE

A water living reptile

ALLIGATORS

Same as above

FANGS

The long teeth in snakes, which are inserted during, snake biting

LIMBLESS LIZZARDS

Snakes are called limb less lizzards

VENOME

The poison (particularly) of snake

AVES

Flying or flightless birds

ARCHAEOPTERYX

Ancient fossil of bird

HOMIOTHERMIS

Animals which can not change their body temperature. **e.g. Man**

WARM BLOODED

Same as above

POIKILOTHERMIS

Animals which can change their body temperature.
e.g. fishes

COLD BLOODED

Same as above

GIZZERD

A structure in digestive system where food is grinded, because teeth are absent in birds

MAMMALS

Animals which feed milk to young born

PROTOTHERIAN

Mammals without placenta. **e.g. Platypus**

EGG LAYING MAMMALS

Same as above.

METATHERIAN MAMMALS

Mammals with weak placenta. **e.g. Kangaroo**

EUTHERIAN MAMMALS

Mammals with well developed placenta. **e.g. Women**

PRACTICE SHEETS

PORIFERA QUIZ

1. **Sponges were considered plants till**
 - a. 1765
 - b. 1770
 - c. 1780
 - d. 1865
2. **The sponges like other metazoan evolved from**
 - a. *Flagellates*
 - b. Ciliates
 - c. Both a&b
 - d. None
3. **Most sponges are marine, one of the following is freshwater sponge**
 - a. *Bath sponge*
 - b. Ascon
 - c. Sycon
 - d. All
4. **Asexual ways of reproduction in sponges are**
 - a. Fragmentation
 - b. Gemmule formation
 - c. *Both a&b*
 - d. None
5. **One of the following is not found in the skeleton of sponges**
 - a. Proteins
 - b. Calcium carbonate
 - c. Silica
 - d. *Lipid*
6. **The cells in the body of sponges are**
 - a. *Loosely attached*
 - b. Tightly attached
 - c. Both a&b
 - d. None
7. **One of the following cells are specially found in the body wall of sponges**
 - a. *Choanocytes*
 - b. Coenocytes
 - c. Both a&b
 - d. None
8. **The nervous system is**
 - a. Present in sponges
 - b. *Absent in sponges*
 - c. Show low degree of nervous system
 - d. All.
9. **Sponges are**
 - a. *Invertebrates*
 - b. Vertebrates
 - c. Plants
 - d. None
10. **In sponges body contains**

- a. Pores
- b. Wholes
- c. Both a&b
- d. None

NUMBER	CORRECT
1	A
2	A
3	A
4	C
5	D
6	A
7	A
8	B
9	A
10	A

CNIDERIA QUIZ

1. **Cnidarians are called Protostomes because**
 - a) They are Radially symmetrical
 - b) They gave Coelom
 - c) They have one body opening
 - d) None
2. **The old name of CNIDERIA was**
 - a) Coelenterate
 - b) Colenteron
 - c) Both a and b
 - d) None
3. **The name cnideria is based on the basis of cells in the tentacles called**
 - a) Nematocysts
 - b) Nematocytes
 - c) Both
 - d) None
4. **Between ectoderm and endoderm, -----is found**
 - a) Mesoglea
 - b) Mesoderm
 - c) Both
 - d) None
5. **The cnidarians are**
 - a) Radially symmetrical
 - b) Bilateral symmetrical
 - c) Both None
6. **The largest jelly fish in world is called**
 - a) Cynae
 - b) Cynophysae
 - c) Myxophysae
 - d) Cynade
7. **One of following does not belong to cnideria**
 - a) Sea anemone
 - b) Sea urchin
 - c) Hydra
 - d) Jelly fish
8. **One of the following is the free-living form**
 - a) Polyp
 - b) Medusa
 - c) Radia
 - d) Coral
9. **Nematocysts are used for**
 - a) Defense
 - b) Paralyze of prey

- c) Both a and b
- d) None

10. One of the following is the larval stage of jelly fish

- a) Planula
- b) Redulla
- c) Morulla
- d) None

NUMBER	CORRECT
1	C
2	A
3	A
4	A
5	A
6	A
7	B
8	B
9	C
10	A

Platyhelminthes QUIZ

- 1. Majority of Platyhelminthes are parasites of man and animals, only example of free living is**
 - a. Liver fluke
 - b. *Planaria*
 - c. Tapeworm
 - d. None
- 2. Platyhelminthes have 3 germinal layers in the body, hence they are**
 - a. Doloblastic
 - b. Diploblastic
 - c. Both a&b
 - d. Triploblastic
- 3. In Platyhelminthes, Coelom is**
 - a. Present
 - b. Absent
 - c. Not applied
 - d. All
- 4. Platyhelminthes use flame cells for excretion, and these cells are called**
 - a. Protonephridia
 - b. Metanephridia
 - c. Nephridia
 - d. All
- 5. Fasciola hepatica belong is a common parasite of sheep and goats, and belongs to class**
 - a. Trematoda
 - b. Cestoda
 - c. Turbellaria
 - d. None
- 6. The head of tape worm is called**
 - a. Scolex
 - b. Sucker
 - c. Both a&b
 - d. None
- 7. Platy helminthes are**
 - a. Bilaterally symmetrical
 - b. Radially symmetrical
 - c. Vertical
 - d. None
- 8. Respiration in Platy helminthes takes place by means of**
 - a. Diffusion
 - b. Osmosis
 - c. Osmoregulation
 - d. None

NUMBER	OPTION
1	B
2	D
3	B
4	A

5	A
6	A
7	A
8	A

ASCHHELMINTH QUIZ

1. Aschelminthes are generally called

a. Cestodes

b. *Nematodes*

c. Trematodes

d. All

2. Roundworms are included in

a. *Ascelminthes*

b. Platyhelminthes

c. Both

d. None

3. Nematodes are common parasites of plants and animals

a. *True*

b. False

4. Nearly -----species of nematodes are common parasites of humans

a. *50*

b. 100

c. 200

d. 300

5. Nematodes posses

a. *Pseudocoelom*

b. Coelom

c. Acoelome

d. All

6. Pseudocoelom lies between endoderm and mesoderm

a. *True*

b. False

7. Most popular example of nematodes is

a. Ascaris worm

b. Pinworm

c. Hookworm

d. None

8. Nematodes are

a. *Unisexual*

b. Bisexual

c. Hermaphrodite

d. All

ANNELIDA QUIZ

- 1. Annelida is a phylum of**
 - a. segmented worms
 - b. Un-segmented worms
 - c. Both a&b
 - d. None
- 2. Annelida are different than nematode in having**
 - a. segments
 - b. Rounded body
 - c. Both a&b
 - d. None
- 3. The segmentation in annelids is**
 - a. True
 - b. False
 - c. Both a&b
 - d. None
- 4. The arrangement of segments in annelids is similar so they have**
 - a. Heteronomous metamerism
 - b. Homonomous metamerism
 - c. Both a&b
 - d. All
- 5. Excretion in earthworm is by means of**
 - a. Protonephridia
 - b. Nephridia
 - c. Metanephridia
 - d. All
- 6. Annelids are generally limbless, only example that possess lateral legs is**
 - a. Neries
 - b. Leech
 - c. Earth worm
- 7. The lateral legs in Neries are called**
 - a. Pseudopodia
 - b. Parapodia
 - c. Felopodia
 - d. None
- 8. One example of annelida which have unsegmented body and belongs to Archiannelida and is only found in marine water is**
 - a. Nerilla
 - b. Dephnia
 - c. Both a&b
 - d. None
- 9. -----has two suckers and are considered medicinal animals**
 - a. Earthworm
 - b. Dinophilus
 - c. Leech
 - d. All
- 10. Annelids are thought to be evolved from**
 - a. Platyhelminthes
 - b. Aschelminths
 - c. Both a&b

- d. None
- e.

MOLLUSK QUIZ

1. **Mollusks are considered as**
 - a. Largest phylum
 - b. **Second largest phylum**
 - c. They are not phylum
 - d. None
2. **The largest invertebrate animal is in phylum Mollusca, and it is**
 - a. Snail
 - b. Octopus
 - c. **Giant squid**
 - d. All
3. **Mollusca are allied with annelids due to have**
 - a. **segmentation in body**
 - b. Because it comes after annelida
 - c. Both
 - d. None
4. **-----is the example of mollusk which posses segmented body**
 - a. Nerima
 - b. **Neoplania**
 - c. Both
 - d. None
5. **The soft portion of body which is enclosed in calcareous shell is called**
 - a. Mantle
 - b. Foot
 - c. **Both a&b**
 - d. None
6. **One of the following posses segments and is linked with Annelida**
 - a. *Neoplania*
 - b. Neries
 - c. Nererlla
 - d. All
7. **Siphon in some mollusks is used for**
 - a. *Respiration*
 - b. Excretion
 - c. Both
 - d. None
8. **In scaphopoda (tooth shell) heart and gills are**
 - a. Present
 - b. Absent
9. **Snails belong to class Gastropoda. They live in a shell which is**
 - a. *Twisted*
 - b. Bivalve
 - c. Internal shell

d. Nil

10. One of the following in Mollusk is called the largest invertebrates

a. Octopus

b. Giant Squid

c. Loligo

d. None

ARTHROPODA QUIZ

- 1. The name arthropoda indicate that animals have**
 - a. Jointed leg
 - b. Segmented body
 - c. Both
 - d. None
- 2. Nearly -----species of arthropods are identified so far**
 - a. 1000000
 - b. 900,000
 - c. 2000000
 - d. 1900000
- 3. Insects have circulatory system**
 - a. Open
 - b. Close
 - c. Partially closed
 - d. None
- 4. One of the following is an arthropod which has not changed since its creation**
 - a. King crab
 - b. Horse shoe
 - c. Both
 - d. None
- 5. Arthropods respire through lungs, gills and trachea**
 - a. True
 - b. False
- 6. The largest class in phylum arthropoda is**
 - a. Merostomata
 - b. Arachnida
 - c. *Insecta*
 - c. Diplopoda
- 7. Arthropoda is called largest phylum because it has greatest number of**
 - a. Species
 - b. Individual
 - c. Both
 - d. None
- 8. When an insect life cycle passes through egg, larva, pupa and adult, it is referred as**
 - a. Complete metamorphosis
 - b. Incomplete metamorphosis
 - c. Does not apply
 - d. Irrelevant
- 9. All insects can not fly. Those having no wings are termed as**
 - a. Aterigota
 - b. Terigota
 - c. Aflata
 - d. None
- 10. Insects are arthropods that have three parts in body. Part between Head and abdomen is**
 - a. Thorax
 - b. Cephalothorax
 - c. Neck
 - d. None

ECHINODERMATA QUIZ

- 1. Echinoderms are**
 - a. *Radial symmetrical*
 - b. Bilaterally symmetrical
 - c. Asymmetrical
 - d. None
- 2. Echinoderms possess calcareous shell**
 - a. *True*
 - b. False
- 3. All echinoderms are marine animals and some are parasites as well**
 - a. *True*
 - b. False
- 4. Since echinoderms possess a mouth and anus, hence they are called**
 - a. *Deuterostomes*
 - b. Protostomes
 - c. Both
 - d. None
- 5. Starfishes use tube feet for locomotion. System of locomotion is called**
 - a. Water vascular system
 - b. Hydraulic system
 - c. *Both*
 - d. None
- 6. Regeneration in echinoderms is**
 - a. *Better than other vertebrates*
 - b. Less than other vertebrates
 - c. Equal as others
 - d. None
 - e.
- 6. All echinoderms are bottom dwellers of sea water**
 - a. True
 - b. False
- 7. Mostly starfish has 4 or 5 arms. Some possess as many as**
 - a. 40
 - b. 400
 - c. 300
 - d. All
- 8. One of the following is not an example of echinoderms**
 - a. Sea cucumber
 - b. Brittle star
 - c. *Jelly fish*
 - d. Starfish
- 9. Echinoderms are a peculiar side branch of animal evolution and have given rise to no more advanced type of animals**
 - a. *True*
 - b. False
- 10. All echinoderms live in the lowest possible level of marine water, hence they are called Bottom dwellers.**
 - a. *True*
 - b. False

FISHES QUIZ

1. **Group of fishes that evolved before all other vertebrates were**
 - a. Ostichytes
 - b. Bony fishes
 - c. Agnatha
 - d. None
2. -----is called ancestors of all land and water vertebrates
 - a. Lamprays
 - b. Lungfish
 - c. Both
 - d. None
3. **Agnatha fishes are jawless, hence they suck blood and are called vertebrate parasites**
 - a. True
 - b. False
4. **Generally fishes have scales and fins. Agnatha are scale less and fin less fishes**
 - a. True
 - b. False
5. **Fishes can change their body temperature, hence they are called**
 - a. Poekilotherms
 - b. Cold blooded animals
 - c. Both a&b
 - d. None
6. **Among cartilage fishes, like sharks do not have eye lids**
 - a. True
 - b. False
7. **Some fishes in Chondrichytes are ovo-viviparous**
 - a. True
 - b. False
8. **Fishes have 2 chambered hearts**
 - a. True
 - b. False
8. **Which fish is called ancestors of all land vertebrates**
 - a. Cyclostomes
 - b. Lamprays
 - c. Lungfish
 - d. None
9. **Bony fishes are the dominant vertebrates in water**
 - a. True
 - b. False
10. **Fertilization in fishes is**
 - a. Internal
 - b. External
 - c. May be both
 - d. None

AMPHIBIANS QUIZ

- 1. Amphibians are cold blooded animals**
 - a. True
 - b. False
- 2. Period during which amphibians go in winter sleeping is called**
 - a. Hibernation
 - b. Aestivation
 - c. Both
 - d. None
- 3. Amphibians can respire through**
 - a. only lungs
 - b. through skin
 - c. Both a&b
 - d. None
- 4. In amphibians, respiration is called Pulmo-cutaneous**
 - a. True
 - b. False
- 5. Amphibians have four chambered heart**
 - a. True
 - b. False
- 6. Some amphibians have lost their legs and are placed in order**
 - a. Urodela
 - b. Anura
 - c. Apoda
 - d. None
- 7. Frog and toad don't have tail in adult stage. Therefore they are**
 - a. Anura
 - b. Apoda
 - c. Urodella
 - d. None
- 8. Salamander is examples of**
 - a. Urodela amphibians
 - b. Anura
 - c. Apoda
 - d. None
- 9. Fertilization in amphibians is generally external, but some may enjoy internal fertilization**
 - a. True
 - b. False
- 10. Larva of frog is called**
 - a. Trocophore
 - b. Tadpole
 - c. Both
 - d. Anaplura

REPTILE QUIZ

1. **Reptiles are the evolution of**
 - a. Amphibians
 - b. Fishes
 - c. New branch
 - d. None
2. **Generally reptiles are cold blooded animals, but some may maintain body temperature**
 - a. True
 - b. False.
3. **Dinosaurs were the ruling reptiles of past and have become extinct**
 - a. True
 - b. False
4. **Reptiles are called first terrestrial animals**
 - a. True
 - b. False
5. **Snakes produce poison through**
 - a. salivary gland
 - b. Mammary glands
 - c. Poisonous gland
 - d. None
6. **All snakes can produce poison**
 - a. True
 - b. False
7. **Some reptiles have modified their habitat and have adapted water life. Turtle is example of reptiles that lives in water and tortoise lives on land**
 - a. True
 - b. False
8. **The snakes bite and inject blood through**
 - a. Teeth
 - b. Fangs
 - c. Both
 - d. None
9. **Reptiles have both external and internal fertilization**
 - a. True
 - b. False
10. **One of the following is water reptile**
 - a. Turtle
 - b. Crocodile
 - c. Both
 - d. None

AVES QUIZ

1. **All birds have internally hollow bones and can fly**
 - a. True
 - b. False
2. **The birds are living on earth since 150 million years, and were also present in period of dinosaurs**
 - a. True
 - b. False
3. **Birds do not keep any example of fossil record**
 - a. True
 - b. False
4. **Modern birds don't possess teeth hence they have gizzard for mechanical digestion**
 - a. True
 - b. False
5. **Fossil birds Archaeopteryx show teeth in mouth and a bony tail. These characters are believed to be reptilian characters**
 - a. True
 - b. False
6. **Birds have closed circulatory system and have three chambered heart like amphibians**
 - a. True
 - b. False
7. **Birds are purely**
 - a. Homotherms
 - b. Poikilotherms
 - c. Both
 - d. None
8. **Birds are called AVES, because they belong to class AVES**
 - a. True
 - b. False

MAMMALS QUIZ

- Mammals are named so because they possess mammary glands**
 - True
 - False
- Mammals are believed to have evolved from a group of reptiles called Therapsids**
 - True
 - False
- All mammals are viviparous and give birth to young**
 - True
 - False
- Early mammals like duck bill platypus, had no placenta, hence instead of birth, she lays eggs**
 - True
 - False
- Kangaroo is a metatherian mammal and has weak placenta. They are also called marsupials (pouched mammals)**
 - True
 - False
- Eutheria are most advanced mammals but have weak placenta**
 - True
 - False
- The hair found on the body of mammals act as insulator**
 - True
 - False
- One of the following is character of mammals**
 - External ears
 - Body hairs
 - Sweat glands
 - All
- Some mammals have changed their habitat; hence they can be called cold blooded.**
 - True
 - False
- Platypus are not live today and their fossils are seen only**
 - True
 - False