SCHOLAR EYE

BIOLOGY MCQs

CHORDATES

50 Solved MCQs

Ticked answers | Clear explanations

- Notochord
- Dorsal Nerve Cord
- Pharyngeal Slits
- Post-anal Tail

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Inside This Booklet

Practise 50 carefully solved MCQs on Chordates. Tap a part below to jump straight to it.

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How to Read

- **Correct answer** is ticked and highlighted in green.
- Other options are shown with an empty circle.
- A short **explanation** follows every MCQ.

PART 1 — Core Features of Chordates

Questions 1 to 10

Q1 **Which structure is present in ALL chordates at some stage of their life?**

- A) Vertebral column
- ✓ **B) Notochord**
- C) Jointed appendages
- D) Chitinous exoskeleton

Explanation: The notochord is a flexible supporting rod found in every chordate at some stage. A vertebral column is found only in vertebrates.

Q2 **The nerve cord of a chordate is:**

- A) Ventral, solid and double
- B) Ventral, hollow and single
- C) Dorsal, solid and double
- ✓ **D) Dorsal, hollow and single**

Explanation: Chordates have a single, dorsal, hollow nerve cord. Non-chordates such as earthworms and insects have a ventral, solid, double nerve cord.

Q3 **In humans, pharyngeal gill slits (pouches) appear:**

- ✓ **A) Only during embryonic life**
- B) Throughout adult life
- C) Only in infancy
- D) Only after puberty

Explanation: They are seen only in the embryo and later develop into structures such as the Eustachian tube, tonsils, thymus and parathyroid glands.

Q4 The post-anal tail of a chordate is:

- A) A tail lying in front of the anus
- ✓ **B) A muscular extension of the body beyond the anus**
- C) Found only in fishes
- D) Present only in adults

Explanation: It extends beyond the anus and aids locomotion in many chordates. In humans it is reduced to the coccyx.

Q5 Which feature belongs to NON-chordates and not to chordates?

- A) Notochord
- B) Pharyngeal gill slits
- ✓ **C) Ventral solid nerve cord**
- D) Post-anal tail

Explanation: A ventral, solid nerve cord is typical of non-chordates. The other three are chordate characters.

Q6 **In chordates, the heart is located on the:**

- A) Dorsal side
- ✓ **B) Ventral side**
- C) Lateral side
- D) Posterior end

Explanation: The chordate heart lies ventrally, below the alimentary canal. In non-chordates like arthropods, the heart is dorsal.

Q7 **Phylum Chordata is divided into how many subphyla?**

- A) Two
- ✓ **B) Three**
- C) Four
- D) Five

Explanation: The three subphyla are Urochordata, Cephalochordata and Vertebrata.

Q8 **Which one is NOT a subphylum of Chordata?**

- A) Urochordata
- B) Vertebrata
- ✓ **C) Hemichordata**
- D) Cephalochordata

Explanation: Hemichordata is a separate phylum, not a subphylum of Chordata.

Q9 **The notochord develops from which embryonic germ layer?**

- A) Ectoderm
- B) Endoderm
- C) Neural crest
- ✓ **D) Mesoderm**

Explanation: The notochord is a mesodermal structure that forms along the dorsal midline of the embryo.

Q10 **In most adult vertebrates, the notochord is replaced by the:**

- A) Skull
- B) Ribs
- ✓ **C) Vertebral column**
- D) Sternum

Explanation: The vertebral column replaces the notochord in most vertebrates. Remnants persist in the discs between vertebrae.

PART 2 — Urochordata & Cephalochordata

Questions 11 to 20

Q11 **Urochordates are commonly known as:**

- A) Lancelets
- B) Lampreys
- ✓ **C) Sea squirts (tunicates)**
- D) Hagfishes

Explanation: Urochordates such as Ascidia and Herdmania are called sea squirts or tunicates.

Q12 **In urochordates, the notochord is present only in the:**

- ✓ **A) Larval tail**
- B) Adult head
- C) Whole adult body
- D) Adult gut

Explanation: It is confined to the tail of the free-swimming larva and disappears in the adult.

Q13 **Which one is an example of Urochordata?**

- A) Branchiostoma
- B) Petromyzon
- C) Myxine
- ✓ **D) Herdmania**

Explanation: Herdmania is a sea squirt. Branchiostoma is a cephalochordate, while Petromyzon and Myxine are cyclostomes.

Q14 The larva of a tunicate resembles a:

- A) Trochophore
- **B) Tadpole**
- C) Nauplius
- D) Caterpillar

Explanation: The ascidian larva is tadpole-like, with a notochord, dorsal nerve cord and tail.

Q15 The adult tunicate body is covered by a protective:

- **A) Tunic**
- B) Calcium carbonate shell
- C) Chitinous cuticle
- D) Layer of scales

Explanation: The tunic, made of a cellulose-like substance called tunicin, gives the group its name.

Q16 **Retrogressive metamorphosis is seen in:**

- A) Frog
- B) Amphioxus
- C) Shark
- ✓ **D) Ascidian**

Explanation: The ascidian larva loses its notochord, nerve cord and tail and becomes a sessile adult.

Q17 **Amphioxus belongs to the subphylum:**

- ✓ **A) Cephalochordata**
- B) Urochordata
- C) Vertebrata
- D) Hemichordata

Explanation: Amphioxus (Branchiostoma) is the classic example of Cephalochordata.

Q18 **In cephalochordates, the notochord extends from head to tail and:**

A) Disappears in the adult

B) Persists throughout life

C) Is limited to the head

D) Is replaced by vertebrae

Explanation: The name Cephalochordata means notochord extending into the head, and it persists throughout life.

Q19 **Another common name of Amphioxus is:**

A) Sea squirt

B) Hagfish

C) Lancelet

D) Sea horse

Explanation: Amphioxus is called a lancelet because its body is shaped like a small blade.

Q20 **Amphioxus obtains food mainly by:**

- A) Hunting small fish
- B) Parasitising other animals
- C) Grazing on plants
- ✓ **D) Filter feeding**

Explanation: Cilia in the pharynx drive water in, and food particles are trapped in mucus.

PART 3 — Cyclostomes & Fishes

Questions 21 to 30

Q21 **Jawless vertebrates belong to class:**

- ✓ **A) Cyclostomata**
- B) Chondrichthyes
- C) Osteichthyes
- D) Amphibia

Explanation: Cyclostomes such as lampreys and hagfishes have a circular, jawless sucking mouth.

Q22 **Which one is a cyclostome?**

- A) Scoliodon
- B) Labeo
- ✓ **C) Petromyzon**
- D) Hippocampus

Explanation: Petromyzon (lamprey) is a cyclostome. Scoliodon is a shark, while Labeo and Hippocampus are bony fishes.

Q23 **The skin of cartilaginous fishes bears:**

- A) Cycloid scales
- ✓ **B) Placoid scales**
- C) Feathers
- D) Hair

Explanation: Placoid scales are tooth-like and give the skin a rough texture in sharks and rays.

Q24 **Which one is a cartilaginous fish?**

- A) Catla
- B) Hippocampus
- C) Exocoetus
- ✓ **D) Scoliodon**

Explanation: Scoliodon (dogfish) has a cartilaginous endoskeleton. The other three are bony fishes.

Q25 **The swim bladder of bony fishes mainly helps in:**

- A) Digestion
- ✓ **B) Buoyancy control**
- C) Excretion
- D) Hearing only

Explanation: The swim bladder is filled with gas and helps the fish float at a chosen depth.

Q26 The heart of a fish is:

- ✓ **A) Two-chambered**
- B) Three-chambered
- C) Four-chambered
- D) One-chambered

Explanation: A fish heart has one atrium and one ventricle and pumps only deoxygenated blood.

Q27 Which fish has a gill cover called the operculum?

- A) Scoliodon
- B) Pristis
- C) Trygon
- ✓ **D) Catla**

Explanation: Bony fishes like Catla have an operculum. Cartilaginous fishes have separate gill slits.

Q28 **Which one is a bony fish?**

- A) Torpedo
- B) Pristis
- C) Trygon
- ✓ **D) Exocoetus**

Explanation: Exocoetus (flying fish) is a bony fish. Torpedo, Pristis and Trygon are cartilaginous.

Q29 **Fishes are:**

- A) Homeothermic
- B) Endothermic
- ✓ **C) Poikilothermic**
- D) Warm-blooded

Explanation: Their body temperature varies with the surroundings, so they are cold-blooded.

Q30 In male cartilaginous fishes, the pelvic fins bear:

- ✓ **A) Claspers**
- B) Flippers
- C) Wings
- D) Tentacles

Explanation: Claspers transfer sperm into the female, so fertilisation is internal.

PART 4 — Amphibians & Reptiles

Questions 31 to 40

Q31 The heart of an amphibian is:

- A) Two-chambered
- ✓ **B) Three-chambered**
- C) Four-chambered
- D) Five-chambered

Explanation: It has two atria and one ventricle, so oxygenated and deoxygenated blood mix partly.

Q32 **Which one is an amphibian?**

- A) Chelone
- ✓ **B) Bufo**
- C) Crocodylus
- D) Hemidactylus

Explanation: Bufo (toad) is an amphibian. Chelone is a turtle, while Crocodylus and Hemidactylus are reptiles.

Q33 **The skin of amphibians is typically:**

- A) Dry with scales
- B) Covered with feathers
- ✓ **C) Moist and glandular without scales**
- D) Covered with hair

Explanation: A moist, scale-less skin allows gas exchange, which supports cutaneous respiration.

Q34 **Fertilisation in most amphibians is:**

- A) Internal
- ✓ **B) External**
- C) Absent
- D) By budding

Explanation: Most amphibians release eggs and sperm in water, where fertilisation takes place.

Q35 **The skin of reptiles is:**

- A) Moist with many mucous glands
- B) Covered with hair
- ✓ **C) Dry with epidermal scales or scutes**
- D) Covered with feathers

Explanation: A dry, cornified skin with scales reduces water loss on land.

Q36 **Which one is a reptile?**

- A) Salamandra
- B) Rana
- C) Ichthyophis
- ✓ **D) Alligator**

Explanation: Alligator is a reptile. Salamandra, Rana and Ichthyophis are amphibians.

Q37 **Which reptile has a four-chambered heart?**

- A) Lizard
- B) Snake
- ✓ **C) Crocodile**
- D) Turtle

Explanation: Most reptiles have a three-chambered heart, but crocodiles have a four-chambered heart.

Q38 Which one is a limbless reptile?

- ✓ **A) Naja**
- B) Chameleon
- C) Calotes
- D) Testudo

Explanation: Naja (cobra) is a snake, and snakes are limbless. Chameleon and Calotes are lizards, and Testudo is a tortoise.

Q39 Which one is a limbless amphibian?

- A) Rana
- B) Hyla
- C) Bufo
- ✓ **D) Ichthyophis**

Explanation: Ichthyophis is a caecilian, a limbless, worm-like amphibian.

Q40 **Reptiles, birds and mammals are called amniotes because the embryo is surrounded by the:**

A) Operculum

B) Amnion

C) Tunic

D) Notochord

Explanation: The amnion is a fluid-filled membrane that protects the embryo and allows development on land.

PART 5 — Birds & Mammals
Questions 41 to 50

Q41 In birds, the forelimbs are modified into:

- ✓ **A) Wings**
- B) Fins
- C) Flippers
- D) Claspers

Explanation: Wings are modified forelimbs used for flight, while the hind limbs are used for walking and perching.

Q42 The light, hollow bones of birds with air cavities are called:

- A) Spongy bones
- B) Dermal bones
- C) Cartilaginous bones
- ✓ **D) Pneumatic bones**

Explanation: Pneumatic bones reduce body weight, which helps in flight.

Q43 **Birds and mammals have a:**

- A) Two-chambered heart
- B) Three-chambered heart
- ✓ **C) Four-chambered heart**
- D) One-chambered heart

Explanation: A four-chambered heart completely separates oxygenated and deoxygenated blood.

Q44 **Which two classes are warm-blooded (homeothermic)?**

- A) Pisces and Amphibia
- B) Reptilia and Pisces
- C) Amphibia and Reptilia
- ✓ **D) Aves and Mammalia**

Explanation: Birds and mammals maintain a constant body temperature.

Q45 Which one is a flightless bird?

- ✓ **A) Struthio**
- B) Pavo
- C) Columba
- D) Corvus

Explanation: Struthio (ostrich) cannot fly. Pavo (peacock), Columba (pigeon) and Corvus (crow) can fly.

Q46 The sound-producing organ of birds is the:

- A) Larynx
- B) Pharynx
- C) Glottis
- ✓ **D) Syrinx**

Explanation: The syrinx is located at the base of the trachea, where it divides into bronchi.

Q47 Which feature is exclusive to mammals?

- A) Feathers
- B) Gills
- ✓ **C) Mammary glands**
- D) Scales

Explanation: Mammary glands, which produce milk to nourish the young, are found only in mammals.

Q48 Which one is an egg-laying mammal?

- A) Macropus
- ✓ **B) Ornithorhynchus**
- C) Panthera
- D) Elephas

Explanation: Ornithorhynchus (platypus) lays eggs. Macropus is a marsupial, and Panthera and Elephas are placental mammals.

Q49 Most mammals have how many cervical vertebrae?

- A) Five
- B) Six
- ✓ **C) Seven**
- D) Nine

Explanation: Humans and giraffes both have seven cervical vertebrae.

Q50 Which one is a true flying mammal?

- A) Exocoetus
- B) Draco
- C) Columba
- ✓ **D) Pteropus**

Explanation: Pteropus (flying fox) is a bat. Exocoetus is a fish, Draco is a lizard and Columba is a bird.

Quick Answer Key

Tap any question number to jump back to it.

1 B	11 C	21 A	31 B	41 A
2 D	12 A	22 C	32 B	42 D
3 A	13 D	23 B	33 C	43 C
4 B	14 B	24 D	34 B	44 D
5 C	15 A	25 B	35 C	45 A
6 B	16 D	26 A	36 D	46 D
7 B	17 A	27 D	37 C	47 C
8 C	18 B	28 D	38 A	48 B
9 D	19 C	29 C	39 D	49 C
10 C	20 D	30 A	40 B	50 D



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