

DEPARTMENT OF ZOOLOGY
NAMBOL L. SANOI COLLEGE, NAMBOL

QUESTION BANK FOR ZOOLOGY PREVIOUS YEARS

2016-19

BSc 3rd SEMESTER

PAPER-III/ ZOO 303

UNIT I: GENERAL ORGANIZATION OF CHORDATA

MCQ

- (a) Coelom in Amphioxus is greatly reduced due to the development of 2016
- (i) pharynx
 - (ii) atrium
 - (iii) myotome
 - (iv) gill
- (b) Retrogressive metamorphosis is found in 2016
- (i) Amphioxus
 - (ii) Balanoglossus
 - (iii) Herdmania
 - (iv) Petromyzon
- (c) Which of the following is not characteristic of members Urochordata or Tunicata? 2017
- (i) Notochord and hollow central nervous system are present only in the larval stage
 - (ii) The body is externally covered by thick cellulose cuticle or tunic
 - (iii) The coelom is absent
 - (iv) None of the above
- (d) One of the following primitive classes of chordates containing Amphioxus and a few related forms which are all marine is 2017
- (i) Cephalochordata
 - (ii) Urochordata
 - (iii) Hemichordata
 - (iv) Vertebrata
- (e) A Branchiostoma and an urochordate are similar 2018
- (i) for possession of U-shaped alimentary canal
 - (ii) for possession of hermaphroditism
 - (iii) for the absence of segmentation
 - (iv) for possession of pharynx perforated by gill slits
- (f) Which of the following is the larva of Balanoglossus? 2018
- (i) Trochophore larva
 - (ii) Auricularia larva
 - (iii) Tornaria larva
 - (iv) Bipinnaria larva

- (g) Who created the phylum Chordata? 2019
- (i) Jordan
 - (ii) Linnaeus
 - (iii) Balfour
 - (iv) Mayr

Very short answer carrying 1mark

Short Answer carrying 3 marks

- a) Write on the structure and function of endostyle in Herdmania. 2016
- b) Differentiate between Kolliker's pit and Hatschek's pit. 2016
- c) Write the affinities of Balanoglossus with Echinoderms. 2016
- d) Distinguish between Acrania and Craniata. 2017
- e) Write a note on the ciliary mode of feeding of Amphioxus. 2017
- f) What is retrogressive metamorphosis? Illustrate this phenomenon with reference to the life history of Ascidia. 2018
- g) Write note on the affinities of Balanoglossus with Annelids. 2018
- h) Amphioxus lanceolatus is considered as degenerate Chordate. Why? 2019
- i) Who named Amphioxus lanceolatus? Urochordata is also known as Tunicata due to the presence of an organic compound similar to cellulose and bag-shaped. What is the name of it? Is it a bisexual urochordate animal? 2019

Long Answer type Questions

UNIT II: AGNATHA AND PISCES

MCQ

- (a) The character which is not common in both Petromyzon and Myxine is 2016
- (i) absence of exoskeleton in the skin
 - (ii) presence of single nostril
 - (iii) presence of persistent notochord
 - (iv) direct development

- (b) A fish with unproportionately large pectoral fins is 2016
 (i) stingray
 (ii) flying fish
 (iii) cuttle fish
 (iv) devilfish
- (c) Placoid scales are present in 2017
 (i) Hippocampus
 (ii) Scoliodon
 (iii) Labeo
 (iv) Protopterus
- (d) Which of the following has sucking circular mouth without jaws? 2017
 (i) Cyclostomes
 (ii) Osteichthyes
 (iii) Chondrichthyes
 (iv) Cnidarians
- (e) Which of the following characters is a specialized character of Petromyzon? 2018
 (i) Unconstricted notochord
 (ii) Persistence of pronephros
 (iii) Rasping tongue
 (iv) Rudimentary sympathetic nervous system
- (f) Ampulla of Lorenzini is a 2018
 (i) temperature receptor
 (ii) photoreceptor
 (iii) chemoreceptor
 (iv) rheoreceptor
- (g) Sharks are 2019
 (i) bony fishes
 (ii) ostariophysian fishes.
 (i) pleurotrematic fishes.
 (iv) sarcopterygian fishes.
- (f) Accessory respiratory organ addition to gills is present in 2019
 (i) Labeo rohita
 (ii) Catla catla
 (ii) Trichogaster fasciata
 (iv) Pethia manipurensis

Very short answer carrying 1mark

- a) Give the name of three branches of the tenth cranial nerve of Scoliodon. 2016
 b) What is the main function of the air bladder in fishes 2016

- c) Give one point of difference between placoid and cycloid scale of fish. 2016
- d) Name a fish which has labyrinthiform accessory respiratory organ in addition to the gills. 2017
- e) What is mermaid's purse? 2017
- f) Why are cyclostomes called the lowest of the living vertebrates? 2018
- g) Name the accessory respiratory organ present in Anabas. 2018
- h) Name a fish which has pharyngeal lung in addition to the gills. 2019
- i) What is the pneumatic sac of fish? 2019

Short Answer carrying 3 marks

- a) Distinguish between catadromous fish and anadromous fish. 2016
- b) Write a note on the parental care of fishes. 2016
- c) Draw a well-labelled diagram of the afferent branchial vessels of Scoliodon. 2017
- d) Discuss the three types of lungfishes. 2017
- e) Draw a neat labelled diagram of the brain of Scoliodon and a dogfish 2018
- f) What is swim bladder? How does it develop? Give one function of it. 2018
- g) Draw a well-labelled diagram of heterocercal tail of dogfish indicating epichordal and hypochordal fins. 2019
- h) What is known as 'the uncles of land dwellers'? A fish can survive for about five years by breathing air if the water dries up. Name the fish and its order. 2019

Long Answer type Questions

UNIT III: AMPHIBIA AND REPTILEA

MCQ

Very short answer carrying 1mark

Short Answer carrying 3 marks

- a) Draw a neat labelled diagram of urinogenital system of female Calotes. 2016
- b) Distinguish between Lacertilia and Ophidia. 2017
- c) When a snake bites a person on the leg and leaves only two punctures on the skin of the victims, the snake has hood on the neck. Is it a poisonous or non-poisonous snake? What other distinguishing characters will it possess? 2017
- d) Write a brief note on the origin of Amphibia. 2018
- e) "Mesozoic era is called the Golden Age of Reptiles." Give three important points. 2018
- f) Name the animal which is known as 'the servant of water' and its order. What is the name of phenomenon which emphasizes the retention of embryonic or larval features in the adult body? 2019
- g) How many pairs of cranial nerves are present in dogfish, toad and rabbit? 2019
- h) Write the scientific name of the oldest known living reptile as fossil which has the presence of third eye. What is the order of this animal? 2019

Long Answer type Questions

- a) Classify the class Amphibia giving important characters and examples of each group. 2016
- b) Describe the structure of the biting apparatus of a poisonous snake and its mode of working. 2016
- c) Describe briefly the development and metamorphosis of frog. 2017
- d) Write an essay on Mesozoic reptiles. 2017
- e) Discuss the distinction between poisonous and nonpoisonous
- f) snakes of india. 2018
- g) classify the class reptilia up to living orders with examples. 2018
- h) Write the two important distinguishing characters of Gymnophiona and Urodela with suitable examples found in Manipur. 2019

UNIT IV: AVES AND MAMMALIA

MCQ

- (a) The character which is common in both Archaeopteryx and modern flying birds is the presence of 2016
- (i) pneumatic bone
- (ii) keel on the sternum
- (iii) pygostyle
- (iv) feather
- (b) In human, the dental formula for the permanent teeth is 2016
- (i) 2,0,3,3 1,0,2,3
- (ii) 2,1,3,3 1,0,2,3
- (iii) 2,1,2,3 2,1,2,3
- (iv) 1,3,0,3 1,2,0,3
- (c) The tail in rabbit serves as 2017
- (i) balancing organ
- (ii) sensory organ
- (iii) decorative structure
- (iv) hearing aid
- (d) Which of the following is an oviparous mammal? 2017
- (i) Equus
- (ii) Macropus
- (iii) Panthera
- (iv) Ornithorhynchus
- (e) Archaeopteryx is similar to a modern bird 2018
- (i) in having beak
- (ii) in having long tail
- (iii) in having toothed jaw
- (iv) for the absence of uncinat process

- (f) Marsupials differ from placental mammals in which one of the following characters? 2018
- (i) Teats in mammary glands
 - (ii) Vertebrae possess epiphyses
 - (iii) Ribs are double headed
 - (iv) Absence of corpus callosum
- (g) Toothless mammal is 2019
- (i) duckbill
 - (ii) dugong
 - (iii) anteater
 - (iv) sea cow

Very short answer carrying 1mark

- a) Which type of jaw suspension is present in rabbit? 2016
- b) Write the correct vertebral formula of human. 2016
- c) In the skin of which animal hairs are modified as horn? 2017
- d) What do you mean by OS innominatum? 2017
- e) What is wish-bone? 2017
- f) What is synsacrum? 2018
- g) What is wishbone? 2018
- h) How many pair of cranial nerves are present in Rabbit? 2018
- i) Name the bone which a forked bone in front of the breast bone in a bird consisting chiefly of the two clavicles fused at their median or lower end. 2019

Short Answer carrying 3 marks

- a) How does a bird sleep on a twig without falling down? Explain. 2016

Long Answer type Questions

- a) Describe the urinogenital system of pigeon. What is the significance of presence of Single ovary in birds? Discuss. 2016
- b) Classify Metatheria up to suborders by giving distinctive characters and examples of each 2016
- c) Write a short essay on dentition in mammals. 2017
- d) Describe in brief the excretory system of rabbit. 2017
- e) Explain the affinities and evolutionary significance Archaeopteryx. 2017
- f) write a short essay on the origin of birds. 2018
- g) give an account on the different types of placenta in mammals. 2018
- h) What is marsupium? Name the original home of marsupial animals in the past and the present. Write the advance characters of Metatherians, 2019
- i) What is pterolysis? Young chicken's body is fully covered by short and soft feathers. What is the type of feather for it? Pigeons are altricial bird. Why? 2019

- j) What are teeth? Name the animal which has an open-rooted upper incisors.
What are the uses of upper canine teeth in Walrus, *Odobenus rosmarus*? 2019

UNIT V: COMPARATIVE ANATOMY

MCQ

Very short answer carrying 1 mark

- a) Give two differences between epidermis and dermis 2016
 b) What is the name of the hormone controlling the contraction of uterine muscle at the time of child birth? 2017
 c) Define heterocrine gland giving example. 2018
 d) Posterior lobe of pituitary gland is not a true endocrine gland. Why? 2019
 e) An important bar of cartilage is present in forming the lower jaw of chordates. What is the name of this cartilage? 2019

Short Answer carrying 3 marks

- a) Write the functions of thyroxine hormone. 2016
 b) Differentiate between diabetes mellitus and diabetes insipidus. 2016
 c) Compare the stomach of pigeon and cow. 2017
 d) Name the cell groups of pancreas which secrete hormones. Compare the functions of low and high secretion of insulin in man. 2017
 e) Differentiate between Mullerian duct and Wolffian duct. 2017
 f) Distinguish between mesonephros and metanephros type of kidney with examples. 2018
 g) Give a comparative account on the sternum in vertebrates of amphibians and birds. 2018
 h) Compare the structure of heart of amphibians and reptiles with diagram. 2018
 i) Define gland. Write the difference between endocrinology and hormonology. 2019
 j) "Skin of vertebrate is truly a jack of all trades." Support it by giving three important points only. 2019

Long Answer carrying 6 marks

- a) Describe the structure and functions of pituitary gland. 2016
 b) Give a comparative account of the digestive system of vertebrates. 2016
 c) Give an account of succession of kidney in vertebrates. 2016
 d) Discuss the comparative account of the circulatory system in vertebrates. 2017
 e) Give an account of the jaw suspension in vertebrates. 2017
 f) Describe the structure and functions adrenal gland or supra-renal gland. 2017
 g) Discuss the comparative account of the digestive system of vertebrates. 2018
 h) Describe the structure and functions of pituitary or thyroid gland. 2018
 i) What is the master gland of endocrine gland? Describe the roles of hormone secreted by adenohypophysis. 2019

M/S