

Exercise-1

🔍 Marked Questions are for Revision Questions.

ONLY ONE OPTION CORRECT TYPE

SECTION - A # CHORDATA

- Cold blooded animal is the one which has
 (1) cold blood (2) cold habitat
 (3) low body temperature (4) no regulatory system of body temperature
- Cold blooded animal is
 (1) man (2) snake (3) pigeon (4) cattle
- Larva of *Balanoglossus* is a
 (1) tornaria (2) Muller's larva (3) Kentrogen larva (4) tadpole
- The wheel organ is found in a/an
 (1) ascidian (2) lancelet (3) starfish (4) acorn worm
- Representative of Hemichordata is
 (1) *Scoliodon* (2) *Myxine* (3) *Balanoglossus* (4) *Petromyzon*
- Amphioxus* belongs to the
 (1) Cephalochordata (2) Urochordata (3) Vertebrata (4) Hemichordata
- Besides Annelida and Arthropoda, the metamerism is exhibited by
 (1) Acanthocephala (2) Chordata (3) Mollusca (4) Cestoda
- The jawless vertebrate is
 (1) *Hyla* (2) loris (3) crocodile (4) *Petromyzon*
- The lamprey (*Petromyzon*) is included in the same taxonomic class as that of
 (1) chameleon (*Anolis*) (2) hag fish (*Myxine*)
 (3) salamander (*Ambystoma*) (4) lung fish (*Neoceratodus*)
- The larva of *Petromyzon* is known as
 (1) ammocoete (2) tornaria (3) axolotal (4) bipinnaria
- Oikopleura* belongs to
 (1) Tunicata (2) Cephalochordata (3) Hemichordata (4) Cyclostomata
- Which of the following is not found in vertebrates?
 (1) Bilateral symmetry (2) Gill openings (3) Body scales (4) Cnidoblasts
- Which of the following chordate feature is not shared by the non-chordates?
 (1) Triploblastic body (2) True coelom (3) Bilateral symmetry (4) Pharyngeal gill-slits
- In which of the following notochord is present in embryonic stage?
 (1) All chordates (2) Vertebrates (3) Some chordates (4) Nonchordates
- In urochordata notochord is found in the

- (1) tail of adult (2) test of adult (3) head of adult (4) tail of larva

16. **Statement 1** - Cephalochordate bears notochord all along the body throughout life.

Statement 2 - Urochordate bears vertebral column only in tail region throughout the life.

Pick up the correct option.

- (1) Both are correct (2) 1st correct, 2nd wrong
(3) 1st wrong, 2nd correct (4) Both are wrong

17. Match **list-I** (larval forms) with **list-II** (corresponding adults) and select the correct answer using the codes given below the lists.

List I (Larval forms)		List II (Adults)	
A	Tornaria	1	Star fish
B	Brachiolaria	2	Jelly fish
C	Tadpole	3	<i>Herdmania</i>
D	Trochophore	4	<i>Nereis</i>
		5	<i>Balanoglossus</i>

- (1) A = 5, B = 1, C = 3, D = 4 (2) A = 3, B = 2, C = 2, D = 4
(3) A = 5, B = 2, C = 3, D = 4 (4) A = 3, B = 1, C = 2, D = 1

18. Which of the following statements is true?

- (1) All chordates are vertebrates (2) All vertebrates are chordates
(3) Nonchordates have a vertebral column (4) Invertebrates possess a tubular nerve cord

19. All chordates at one or the other stage have

- (1) a movable jaw (2) vertebral column
(3) pharyngeal gill-slits (4) two pairs of pentadactyl limb

20. Which one of the following animals has a notochord throughout its life?

- (1) Fish (2) Bird (3) Snake (4) *Amphioxus*

21. *Herdmania* belongs to which subphyla which is also called tunicata?

- (1) Cephalochordata (2) Hemichordata (3) Urochordata (4) Protochordata

22. Which one of the following passages is a part of cloaca of vertebrates?

- (1) Rectum (2) Reproductive tract (3) Urinary tract (4) All of these

SECTION - B # CYCLOSTOMATA / PISCES

1. Match list I (product) with list II (source) and select the correct answer using the codes given below the lists.

List I (Products)		List II (Source)	
A	Shagreen	1	Fish manure
B	Isinglass	2	<i>Sturgeon</i>
C	Caviar	3	Skin of elasmobranchs
D	Fish guano	4	Air bladder of fish

- (1) A = 2, B = 4, C = 3, D = 1 (2) A = 3, B = 1, C = 2, D = 4
(3) A = 2, B = 1, C = 3, D = 4 (4) A = 3, B = 4, C = 2, D = 1

2. Branch of biology dealing with the study of fishes is

- (1) toxicology (2) ornithology (3) piscology (4) Ichthyology

3. A vertebrate having entire cartilaginous skeleton is
(1) *Dolphin* (2) *Rana* (3) *Labeo* (4) *Scoliodon*
4. Placoid scales occur in
(1) lizard (2) toad (3) cartilaginous fishes (4) bony fishes
5. In fishes the kidney is
(1) pronephros (2) mesonephros (3) metanephros (4) holonephros
6. Which is a cold blooded animal?
(1) Pigeon (2) Shark (3) Kangaroo (4) Rabbit
7. The group of anamniota includes
(1) birds and mammals (2) reptiles and birds
(3) fishes and amphibians (4) reptiles and mammals
8. Electric organs occur in
(1) sharks (2) gold fish (3) rays (4) *Porpoises*
9. Heart pumps impure blood in
(1) frogs (Amphibia) (2) sharks (Pisces)
(3) lizards (Reptilia) (4) whales (Mammalia)
10. Lateral line system is present in
(1) fishes (2) frogs (3) reptiles (4) men
11. Which of the following is a true fish?
(1) Silver fish (2) Jelly fish (3) Star fish (4) Dog fish
12. Which of the following fish is famous for migration?
(1) *Salmon* (2) Shark (3) Carp (4) Ribbon fish
13. Which of the following fishes is introduced in India by foreigners?
(1) *Clarius batrachus* (2) *Pomphret* (3) *Labeo rohita* (4) *Mystus singhala*
14. Electric organs of fishes are highly modified masses of
(1) nerve cells (2) muscle cells (3) elastic fibres (4) white fibres
15. Lung fishes are
(1) marine inhabitants (2) marine and freshwater inhabitants
(3) freshwater and terrestrial inhabitants (4) freshwater inhabitants
16. Placoid scales are found in
(1) *Scoliodon* (2) *Hippocampus* (3) carps (4) cuttle fish
17. Which of the following is an anadromous fish?
(1) *Anguilla* (2) *Hilsa* (3) *Salmon* (4) yellow eel
18. *Scoliodon* is commonly called dog fish due to one of its following characteristics?
(1) Gait (2) Mouth (3) Carnivorous (4) Power of smell
19. *Torpedo* is commonly known as
(1) sucker fish (2) globe fish (3) electric ray (4) sea horse

20. Isinglass, a type of by product of fish industry, is principally used for
(1) production of insulin (2) feeding cattle, pig and poultry
(3) preparation of paints and varnishes (4) clarification of vinegar, wines and beer
21. Which of the following is not a fish?
(1) Cuttle fish (2) Sucker fish (3) Flat fish (4) Pipe fish
22. Which one of the following types of fishes have heterocercal tail?
(1) Dipnoi fish (2) Bony fish (3) Cartilaginous fish (4) All of these
23. Which of the followings fins are paired in fishes?
(1) Dorsal and anal fin (2) Caudal fin and dorsal fin
(3) Pelvic fin and ventral fin (4) Pectoral fin and pelvic fin
24. Which type of scales are found on the skin of cartilaginous fishes?
(1) Ganoid (2) Placoid (3) Ctenoid (4) Cycloid
25. Fresh water bony fishes maintain water balance by
(1) excreting hypotonic urine (2) excreting salts across their gills
(3) drinking small amount of water (4) excreting water in the form of uric acid
26. Which one of the following sense organs is found in the adults of fishes only?
(1) optic (2) olfactory (3) lateral line (4) all of these
27. Which one of the following is a true fish?
(1) Star fish (2) Dog fish (3) Jelly fish (4) Cuttle fish
28. Air bladder is present in
(1) *Anabas* (2) *Torpedo* (3) *Scoliodon* (4) Elasmobranch
29. Which one of the following is a fish?
(1) Sea horse (2) *Salmon* (3) Bombay duck (4) All of the above
30. Which one of the following scales are similar to the mammalian teeth?
(1) Cycloid (2) Placoid (3) Ganoid (4) Ctenoid

SECTION - C # AMPHIBIA

1. Axolotl is the name given to the larva of
(1) silkworm (2) *Ambystoma* (3) *Amphioxus* (4) roundworm
2. The venous system of frog differs from that of rabbit in the presence of
(1) hepatic portal system (2) renal portal system
(3) three vena cavae (4) hepatic vein
3. Absence of thumb is a characteristic of
(1) rabbit (2) man (3) frog (4) monkey
4. *Salamandra* is
(1) an amphibian (2) a bird (3) a mollusc (4) an echinoderm
5. Which of the following is a limbless amphibian?
(1) *Salamander* (2) *Ichthyophis* (3) *Anguilla* (4) *Pheretima*
6. Common Indian bull frog is

- (1) *Rana tigrina* (2) *Rana esculenta* (3) *Rana sylvatica* (4) *Rana cyanophlyctis*

7. Retention of larval characters even after sexual maturity is called
 (1) ontogenesis (2) parthenogenesis (3) neoteny (4) phyllogenesis
8. Ancestral amphibians were tetrapods that evolved during
 (1) ordovician (2) silurian (3) devonian (4) carboniferous
9. Neck is absent in frog. This helps frog in
 (1) catching prey (2) respiration
 (3) swimming in water (4) jumping on ground

SECTION - D # REPTILIA

1. A non poisonous snake
 (1) cobra (2) krait (3) viper (4) rat snake
2. Besides mammals, diaphragm also occurs in
 (1) birds (2) crocodiles (3) fishes (4) toads
3. A poisonous lizard is
 (1) *Varanus* (2) *Chameleon* (3) *Ancistrodon* (4) *Heloderma*
4. Which is correct for Indian snakes?
 (1) Only sea snakes are non-poisonous (2) Only sea snakes are poisonous
 (3) All water snakes are poisonous (4) All sea snakes are poisonous
5. The most poisonous snake is
 (1) krait (2) tree snake (3) python (4) rat snake
6. Snakes do not have
 (1) movable eye lids (2) girdles (3) limbs (4) All of the above
7. The castings removed as a result of moulting in snakes consist of
 (1) epidermis (2) dermis
 (3) cornified cells (4) stratum germinativum
8. Poison fangs in snakes are present on the
 (1) vomers (2) maxillae (3) palatines (4) premaxillae
9. Gavial or gharial is found in
 (1) fresh water (2) sea water (3) brackish water (4) terrestrial habitat
10. Some reptiles show autotomy which means
 (1) voluntary breaking up of tail to confuse enemy
 (2) signal for charging
 (3) signal for courtship
 (4) state of starvation prior to death
11. When the tail is cylindrical and ventral scales do not extend on the entire width of the belly, the snake is
 (1) non-poisonous (2) either poisonous or non-poisonous
 (3) definitely poisonous (4) deadly poisonous
12. In snakes, the poison glands are modifications of

- (1) lingual glands (2) parotid glands (3) sublingual glands (4) molar glands
13. Even ventricles of reptiles are partitioned but there is mixing of blood
 (1) due to common sites of ejection and entrance of blood in lungs
 (2) auricles are non-partitioned
 (3) heart is partially four-chambered
 (4) None of these
14. Consider the following statements.
 The classification of
 1. amphibians is based on their habitat
 2. reptiles is based on the types of their skull
 3. birds is based on the types their bones
 4. mammals is based on their mode of reproduction
 Of these statements
 (1) 1 alone is correct (2) 1 and 3 are correct (3) 2 alone is correct (4) 2 and 4 are correct
15. Foramen of Panizzae is found in the heart of
 (1) frog (2) pigeon (3) crocodile (4) rabbit
16. Cobra can be distinguished from other snakes by its
 (1) black colour (2) agile habit (3) hood (4) round tail
17. Most favourable land adaptation for reptile is
 (1) pulmonary respiration (2) moist skin
 (3) scales on body (4) none
18. Pear-shaped head, covered with small scales, sharply separated from rest of the body is a feature of the
 (1) pythons (2) vipers (3) kraits (4) cobras
19. Study of snakes is called
 (1) Ichthyology (2) Enterology (3) Serpentology (4) Entomology
20. Scientific name of king cobra is
 (1) *Naja naja* (2) *Vipera russelli* (3) *Bungarus coeruleus* (4) *Naja hannah*
21. Post anal tail is present in a/an
 (1) cobra (2) earthworm (3) scorpion (4) invertebrate
22. A stumpy laterally compressed tail is a characteristic of
 (1) tree snake (2) sea snake (3) rat snake (4) rattle snake
23. Eggs of reptiles and birds can be designated as
 (1) alecithal (2) isolecithal (3) homolecithal (4) telolecithal
24. Most dinosaurs became extinct during
 (1) late triassic period (2) late jurassic period
 (3) cretaceous period (4) early tertiary period
25. Limbless lizard is
 (1) *Draco* (2) *Varanus* (3) *Ophisaurus* (4) *Mabouia*

26. *Ophisaurus* belongs to
 (1) pisces (2) reptilia (3) amphibia (4) mammalia
27. 'Glass snake' is a
 (1) poisonous snake (2) poisonous lizard
 (3) non-poisonous lizard (4) non-poisonous snake
28. Urinary bladder is absent in
 (1) lizards (2) snakes (3) crocodiles (4) both (2) and (3)
29. Study of reptiles is called
 (1) Ichthyology (2) Ornithology (3) Herpetology (4) Ophiology
30. Heart of crocodile is
 (1) three chambered (2) two chambered (3) single chambered (4) four chambered

SECTION - E # AVES

1. Bone marrow does not occur in
 (1) fishes (2) amphibians (3) birds (4) reptiles
2. If a bird is transferred from 30°C to 10°C. The body temperature will change
 (1) to 10°C (2) to 30°C (3) to 15°C (4) Remain unchanged
3. 'Birds are glorified reptiles'. This statement was made by
 (1) Salim Ali (2) Charles Darwin (3) Huxley (4) Haldane
4. Which one of the following is an oviparous animal?
 (1) Pigeon (2) Whale (3) Bat (4) Amoeba
5. Air sacs of birds
 (1) keep body warm (2) facilitate blood circulation
 (3) maintain body temperature (4) reduce body weight
6. Kiwi is found in
 (1) India (2) South America (3) New Zealand (4) East Indies
7. Penguin is found in
 (1) Africa (2) Australia (3) America (4) Antarctica
8. Birds differ from bats in the absence of
 (1) four chambered heart (2) homoiothermy
 (3) diaphragm (4) tracheae
9. Pneumatic bones are found in
 (1) pigeon (2) whale (3) *Rana* (4) shark
10. Penguins belong to the class
 (1) Mammalia (2) Pisces (3) Aves (4) Primates
11. In singing birds, the sound is produced by the
 (1) lungs (2) air sacs (3) syrinx (4) larynx
12. Air sacs are present in

(1) birds

(2) reptiles

(3) mammals

(4) amphibians

SECTION - F # MAMMALIA

1. Which set of animals belongs to the same class?
 (1) Hydra, Jellyfish and Crayfish (2) Bat, Pigeon and Whale
 (3) Spider, Scorpion and Centipede (4) Kangaroo, Whale and Otter
2. Largest living animals belong to
 (1) mammalia (2) pisces (3) echinodermata (4) reptilia
3. Common feature of whale, bat and rat
 (1) presence of external ears
 (2) absence of neck
 (3) extra abdominal testes to avoid higher temperature of body
 (4) presence of muscular diaphragm between thorax and abdomen
4. Gorilla, Chimpanzee, man and monkey belong to same
 (1) order (2) family (3) genus (4) species
5. Lions in India are now found in
 (1) Kaziranga National Park (2) Sunderbans
 (3) Corbett National Park (4) Gir National Park
6. Which of the following is an egg-laying mammal?
 (1) *Pteropus* (2) *Porcupine* (3) *Pangolin* (4) *Tachyglossus*
7. Which of the following lays eggs, yet the female secretes milk?
 (1) Bat (2) Ostrich (3) Kangaroo (4) Platypus
8. A group of animals having marsupium
 (1) eutheria (2) prototheria (3) metatheria (4) monotremata
9. Which one of the following statements is true as regard to a certain mammal and its feature?
 (1) Bats have feathers (2) Platypus is oviparous
 (3) Elephant is ovoviviparous (4) Camel has circular RBCs
10. Sonar system is found only in
 (1) bats (2) birds (3) otter (4) all of these
11. Kangaroo is a native animal of
 (1) Mexico (2) Australia (3) New Zealand (4) Austria
12. Viviparity is found in
 (1) Rabbit (2) Lizard (3) Snake (4) Frog
13. Viviparous animals are
 (1) running birds, silverfish, prawns (2) turtles, snakes, leeches
 (3) bony fishes, frog, lizards (4) scorpions, whales, rabbits
14. A mammal which lays eggs instead of giving birth to offspring is
 (1) rabbit (2) macropus (3) duck-billed platypus (4) whale
15. *Equus* rests on

- (1) one digit (2) three digits (3) four digits (4) five digits
16. The smallest eggs belong to
(1) fishes (2) amphibians (3) reptiles (4) mammals
17. To which taxonomic group does a whale belong to?
(1) Fishes (2) Reptiles (3) Arthropods (4) Mammals
18. The number of cervical vertebrae in humans is
(1) same as that of whale (2) more than that of rabbit
(3) double than that of horse (4) less than that of giraffe
19. External ear pinnae is found in
(1) reptiles (2) mammals (3) aves (4) all vertebrates
20. Pouched mammals are
(1) metatherians (2) prototherians (3) eutherians (4) none of these
21. Which of the following represent maximum number of genera and species?
(1) Aquatic mammals (2) Carnivorous mammals
(3) Herbivorous mammals (4) Terrestrial mammals
22. Marsupialia includes
(1) *Macropus* (2) horse (3) rabbit (4) elephant
23. All mammals
(1) give birth to young ones (2) have a thick coat of hair
(3) nourish their young with milk (4) have a uterus

MISCELLANEOUS QUESTIONS

1. Which of the following character is exclusive to mammals?
(1) presence of a four chambered heart (2) homeothermic condition
(3) respiration by lungs (4) presence of a diaphragm
2. Order primata contains
(1) shrew and hedgehog (2) bats and flying fox
(3) monkeys and man (4) horses and zebra
3. Which of the following snakes is non-poisonous?
(1) Cobra (2) Krait (3) Viper (4) Python
4. The post-anal tail is present in
(1) chordates (2) vertebrates (3) invertebrates (4) in all of them
5. **Statement A** - All metatherians are placental mammals.
Statement B - All placental mammals have menstrual cycle.
(1) Statement A is true and statement B is false.
(2) Statement B is true and statement A is false.
(3) Both the statements A and B are true.
(4) Both the statements, A and B are false.
6. The gills present in Osteichthyes are

- (1) two pairs (2) six to fifteen pairs (3) five pairs (4) four pairs
7. Select the correct order of classification of *Rana tigrina* upto the genus.
 (1) Chordata, Craniata, Amphibia, Gnathostomata, *Rana*
 (2) Chordata, Craniata, Gnathostomata, Amphibia, *Rana*
 (3) Chordata, Amphibia, Gnathostomata, Craniata, *tigrina*
 (4) Chordata, Craniata, Amphibia, Gnathostomata, *tigrina*
8. The cloaca of frog is a common chamber for the urinary tract, reproductive tract and
 (1) alimentary canal (2) portal system
 (3) hepatic portal vessels (4) notochord
9. *Ornithorhynchus* is an example of
 (1) dinosaur (2) monotreme mammal
 (3) marsupial mammal (4) eutherian mammal
10. Two chambered heart is a feature of
 (1) amphibians (2) fishes (3) reptiles (4) birds
11. Venom of cobra destroys
 (1) digestive system (2) immune system (3) nervous system (4) circulatory system
12. Which one of the following pairs of animals includes "jawless fishes"?
 (1) Guppies and hag fishes (2) Mackerals and rohu
 (3) Lampreys and eels (4) Lampreys and hag fishes
13. Which one of the following is a connecting link between mammals and reptiles ?
 (1) *Balanoglossus* (2) *Ornithorhynchus* (3) *Peripatus* (4) *Archaeopteryx*
14. Which one of the following is not a character of chordates?
 (1) Ventral nerve cord (2) Pharyngeal gills slits
 (3) Bilateral symmetry (4) Rod like notochord
15. Which one of the following options, shows correct matching pair?
 (1) Man – Ureotelic (2) Bird – Ammonotelic (3) Fish – Uricotelic (4) Frog – Uricotelic
16. In a frog, cloacal aperture is used for the elimination of
 (1) urine (2) gametes (3) faecal matter (4) All the above
17. Mammalian heart is
 (1) myogenic (2) neurogenic (3) voluntary (4) sympathetic
18. A group of animals having marsupium is
 (1) monotremata (2) eutheria (3) metatheria (4) pantotheria
19. Which sound producing organ is found in a bird?
 (1) Pharynx (2) Larynx (3) Syrinx (4) Trachea
20. Which of the following statements about a particular group of organisms is **CORRECT**?
 (1) Urochordata - Naturally occur in Malabar Hills
 (2) Algae - Smallest proportionate number among plants
 (3) Fishes - largest proportion of numbers among vertebrates
 (4) Mammals - All are quadrupeds and terrestrial

21. Identify the correct statement.
- (1) Dog fish is a bilaterally symmetrical animal covered with placoid scales
 - (2) Saw fish is a bilaterally symmetrical animal covered with ctenoid scales
 - (3) Silver fish is a radially symmetrical animal covered with silvery cycloid scales
 - (4) Angle fish is a radially symmetrical animal covered with ganoid scales

Exercise-2

1. Which of the following is/are present in the respiratory system of insects, fishes and mammals?

(1) Blood containing oxyhaemoglobin	(2) Alveoli
(3) Spiracles	(4) A thin moist surface
2. Which one of the following chordate characteristics is found in adult tunicate?

(1) Presence of notochord	(2) Presence of pharyngeal gill slits
(3) Presence of tail	(4) Presence of dorsal tubular nerve cord
3. The increase in complexity of the vertebrate circulatory system is represented by which of the following combinations?

(1) Toad-rabbit-alligator-shark	(2) Shark-frog-alligator-rabbit
(3) Shark-crocodile-rabbit-frog	(4) Alligator-dog-shark-toad
4. One of the primary characters of chordates is the presence of

(1) paired nerve cords	(2) solid ventral nerve cord
(3) ganglionated nerve cord	(4) dorsal tubular nerve cord
5. Common characteristic of all vertebrates without exception is the

(1) presence of exoskeleton
(2) presence of well developed skull
(3) presence of two pairs of functional appendages
(4) division of body into head, neck, trunk and tail
6. Vertebrates have

(1) body cavity with alimentary canal	(2) dorsal tubular nerve cord
(3) ventrally situated heart	(4) All of these
7. Homoiothermal animals are

(1) pigeon, bat and rabbit	(2) fish, frog and lion
(3) tortoise, lizard and pigeon	(4) rat, snake and crocodile
8. Homoiothermal animal is

(1) frog	(2) fish	(3) rabbit	(4) lizard.
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9. Which of the following is a poikilothermal animal?

(1) Whale	(2) Penguin	(3) Otter	(4) Tortoise
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10. Which of these is not a vertebrate?

(1) <i>Oryctolagus</i>	(2) <i>Amphioxus</i>	(3) Fish	(4) Sparrow
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11. Which one of the following is not an acraniate?

(1) <i>Salpa</i>	(2) <i>Herdmania</i>	(3) <i>Amphioxus</i>	(4) Cyclostome
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12. Mode of feeding in tunicates is
 (1) parasitic (2) macrophagus (3) ciliary filter type (4) myxotrophic
13. During retrogressive metamorphosis of the ascidian tadpole, which one of the following does not regress?
 (1) Nerve cord (2) Gill slits (3) Caudal myotomes (4) Notochord
14. Most fishes, amphibians and reptiles are
 (1) oviparous (2) viviparous (3) scaly skinned (4) homoiothermal
15. Anadromous fishes move
 (1) from sea to fresh water (2) from sea to estuary
 (3) from river to sea (4) from estuary to sea
16. Cartilaginous fishes do not have
 (1) operculum (2) scales (3) gill slits (4) pelvic fins
17. Which is viviparous?
 (1) Bony fish (2) Lung fish (3) Frog (4) Shark
18. Ammocoete larva occurs in the life history of a/an
 (1) lamprey (2) sea urchin (3) *Balanoglossus* (4) ascidian
19. The carnivorous fish, *Gambusia*, is introduced in the lakes, ponds to control a deadly disease in India, feeds on the larvae of
 (1) nephantis (2) dragon fly (3) anopheles (4) all of these
20. Carp fish common in India is
 (1) *Hilsa* (2) *Labeo* (3) *Wallago* (4) *Barbus*
21. In Amphibia, the scales are present beneath the skin of
 (1) toad (2) *Siren* (3) *Ichthyophis* (4) *Proteus*
22. Neoteny is observed in
 (1) *Ambystoma* (2) *Alytes* (3) *Sycon* (4) *Sacculina*
23. First amphibians, appeared during the
 (1) permian period (2) carboniferous period
 (3) devonian period (4) silurian period
24. The skin of frog has
 (1) mucous and poisonous glands (2) sweat and mammary glands
 (3) sweat and sebaceous glands (4) mucous and sweat glands
25. Frog is
 (1) aminotelic (2) ammonotelic (3) ureotelic (4) uricotelic
26. Neoteny is found in
 (1) tadpole (2) *Salamandra* (3) *Hyla* (4) *Axolotl*
27. Heart is 3 or 4 chambered in the vertebrate group
 (1) fishes (2) amphibia (3) reptilia (4) aves
28. A non-poisonous snake is
 (1) *Bungarus* (2) *Viper* (3) *Python* (4) sea snake
29. Vestigial hind limbs occur in the snake
 (1) *Python* (2) cobra (3) krait (4) Russel's viper

30. Which one of the following is a characteristic feature of sea snake?
 (1) Round tail (2) Flat tail (3) Tail with rattle (4) Tail with mouth
31. Golden age of reptiles is
 (1) palaeozoic (2) mesozoic (3) coenozoic (4) proterozoic
32. Teeth conducting poison in a snake are called
 (1) Incisors (2) canines (3) heterodont (4) fangs
33. Which one of the following snakes has sensitive patches called pits that help the snake in tracking down warm blooded animals even in pitch darkness?
 (1) Cobra (2) Banded krait (3) Rattle snake (4) Green python
34. Birds and bats are good fliers, but the bat differs from birds in having a
 (1) diaphragm (2) 4-chambered heart (3) wings (4) small brain
35. An endangered bird is
 (1) condor (2) hillock (3) sun bird (4) great Indian bustard
36. "Pigeon's milk" is secreted in the
 (1) uropygial gland (2) crop glands of female
 (3) crop glands of male and female (4) mammary glands of the pigeon
37. Which one of the following is a flightless bird?
 (1) *Aptenodytes* (2) *Pavo* (3) *Flemingo* (4) *Pelican*
38. Two chief features of mammals which distinguish them from other vertebrates are
 (1) hairy skin and oviparity (2) hairy skin and mammary glands
 (3) mammary glands and teeth (4) pinna and teeth
39. Milk glands are characteristic of
 (1) all vertebrates (2) all mammals
 (3) only placental mammals (4) only primates and ruminants
40. The sweat glands in mammals are primarily concerned with
 (1) regulation of water content (2) regulation of body heat
 (3) killing of skin bacteria (4) removal of excess of salt
41. The first mammal arose
 (1) after the extinction of dinosaurs (2) before the origin of dinosaurs
 (3) along with the dinosaurs (4) from dinosaurs
42. Eutherian mammals are
 (1) oviparous (2) viviparous
 (3) ovoviviparous (4) both oviparous and ovoviviparous

Exercise-3

PART – I – NEET / AIPMT QUESTION (PREVIOUS YEARS)

1. What is the common between parrot, platypus and kangaroo? (AIPMT-2007)
 (1) toothless jaws (2) functional post-anal tail
 (3) oviparity (4) homoiothermy
2. Which one of the following pairs of animals comprise 'jawless fishes'? (AIPMT-2009)
 (1) Guppies and hag fishes (2) Lampreys and eels
 (3) Mackerels and Rohu (4) Lampreys and hag fishes

3. Which one of the following groups of animals is correctly matched with its one characteristic feature without even a single exception? (AIPMT-2011)
- (1) Reptilia - possess 3 - chambered heart with one incompletely divided ventricle
 (2) Chordata - possess a mouth provided with an upper and lower jaw
 (3) Chondrichthyes - possess cartilaginous endoskeleton
 (4) Mammalia - give birth to young one.
4. Uricoteli mode of passing out nitrogenous wastes is found in (AIPMT-2011)
- (1) reptiles and bird (2) birds and annelids
 (3) amphibians and reptiles (4) insects and amphibians
5. Which one of the following animals is correctly matched with its particular named taxonomic category? (AIPMT-2011)
- (1) Tiger - tigris, the species (2) Cuttlefish - Mollusca, a class
 (3) Humans - Primata, the family (4) Housefly - Musca an order
6. In which one of the following the genus name, its two characters and its, class/phylum are correctly matched? (AIPMT-2011)

	Genus name		Two characters	Class/phylum
(1)	Ascaris	(a)	Body segmented	Annelida
		(b)	Males and females distinct	
(2)	Salamandra	(a)	A tympanum represents ear	Amphibia
		(b)	Fertilization is external	
(3)	Pteropus	(a)	Skin possesses hair	Mammalia
		(b)	Oviparous	
(4)	Aurelia	(a)	Cnidoblasts	Coelenterata
		(b)	Organ level of organization	

7. Which one of the following pairs of animals are similar to each other pertaining to the feature stated against them? (AIPMT Mains-2012)
- (1) Pteropus and Ornithorhynchus - Viviparity
 (2) Garden lizard and Crocodile - Three chambered heart
 (3) *Ascaris* and *Ancylostoma* - Metameric segmentation
 (4) Sea horse and Flying fish - Cold blooded (poikilothermal)
8. Which one of the following categories of animals, is correctly described with no single exception in it? (AIPMT Mains-2012)
- (1) All reptiles possess scales, have a three chambered heart and are cold blooded (poikilothermal)
 (2) All bony fishes have four pairs of gills and an operculum on each side.
 (3) All sponges are marine and have collared cells.
 (4) All mammals are viviparous and possess diaphragm for breathing
9. Which one of the following organisms is scientifically correctly named, correctly printed. According to the International Rules of Nomenclature and correctly described? (AIPMT Mains-2012)
- (1) *Musca domestica* - The common house lizard, a reptile
 (2) *Plasmodium falciparum* - A protozoan pathogen causing the most serious type of malaria
 (3) *Felis tigris* - The Indian tiger, well protected in Gir forests.
 (4) *E. coli* - Full name *Entamoeba coli*, a commonly occurring bacterium in human intestine

10. Match the name of the animal (column I), with one characteristics (column II), and the phylum/class (column III) to which it belongs (NEET-2013)

	Column I	Column II	Column III
(1)	<i>Ichthyophis</i>	terrestrial	Reptilia
(2)	<i>Limulus</i>	body covered by chitinous exoskeleton	Pisces
(3)	<i>Adamsia</i>	radially symmetrical	Porifera
(4)	<i>Petromyzon</i>	ectoparasite	Cyclostomata

11. A marine cartilaginous fish that can produce electric current is: (AIPMT-2014)

(1) *Pristis* (2) *Torpedo* (3) *Trygon* (4) *Scoliodon*

12. Which of the following animals is **not** viviparous? (AIPMT-2015)

(1) Elephant (2) Platypus (3) Whale (4) Flying fox (Bat)

13. Which of the following represents the correct combination without any exception? (AIPMT-2015)

	Characteristics	Class
(1)	Mouth ventral; gills without operculum; skin with placoid scales; persistent notochord	Chondrichthyes
(2)	Sucking and circular mouth; jaws absent, integument without scales; paired appendages	Cyclostomata
(3)	Body covered with feather; skin moist and glandular; fore-limbs form wings; lungs form wings; lungs with air sacs	Aves
(4)	Mammary gland; hair on body; pinnae; two pairs of limbs	Mammalia

14. A jawless fish, which lays eggs in fresh water and whose ammocoetes larvae after metamorphosis return to the ocean is: (Re-AIPMT-2015)

(1) *myxine* (2) *Neomyxine* (3) *Petromyzon* (4) *Eptatretus*

15. Which of the following characteristic features always holds true for the corresponding group of animals? (NEET-I-2016)

(1)	3 - chambered heart with one incompletely divided ventricle	Reptilia
(2)	Cartilaginous endoskeleton	Chondrichthyes
(3)	Viviparous	Mammalia
(4)	Possess a mouth with an upper and a lower jaw	Chordata

16. Which one of the following characteristics is not shared by birds and mammals? (NEET-I-2016)

(1) Warm blooded nature (2) Ossified endoskeleton
(3) Breathing using lungs (4) Viviparity

17. Choose the correct statement. (NEET-II-2016)

(1) All Pisces have gills covered by an operculum.
(2) All mammals are viviparous.

(3) All cyclostomes do not possess jaws and paired fins.

(4) All reptiles have a three-chambered heart.

18. Which of the following represents order of 'Horse'? (NEET-2017)
 (1) Equidae (2) Perissodactyla (3) Caballus (4) Ferus
19. An important characteristic that hemichordates share with Chordates is (NEET-2017)
 (1) Absence of notochord (2) Ventral tubular nerve cord
 (3) Pharynx with gill slits (4) Pharynx without gill slits
20. Which among these is the **correct** combination of aquatic mammals? (NEET-2017)
 (1) Seals, Dolphins, Sharks (2) Dolphins, Seals, *Trygon*
 (3) Whales, Dolphins, Seals (4) *Trygon*, Whales, Seals
21. Which one of these animals is not a homeotherm? (NEET-2018)
 (1) *Macropus* (2) *Psittacula* (3) *Camelus* (4) *Chelone*
22. Identify the vertebrate group of animals characterized by crop and gizzard in its digestive system. (NEET-2018)
 (1) Amphibia (2) Osteichthyes (3) Aves (4) Reptilia

PART - II - AIIMS QUESTION (PREVIOUS YEARS)

1. Which one of the following animals is correctly-matched with its one characteristic and the taxon? (AIIMS-2006)
- | Animal | Characteristic | Taxon |
|------------------------|--------------------------|-----------|
| (1) millipede | ventral nerve cord | arachnida |
| (2) duck bill platypus | oviparous | mammalia |
| (3) silverfish | pectoral and pelvic fins | chordata |
| (4) sea anemone | triploblastic | cnidaria |
2. All mammals without any exception are characterized by (AIIMS-2006)
 (1) viviparity and biconcave red blood cells
 (2) extra-abdominal testes and a four-chambered heart
 (3) heterodont teeth and 12 pairs of cranial nerves
 (4) a muscular diaphragm and milk producing gland
3. Which of the following statements are true/false? (AIIMS-2015)
 (A) In *Torpedo* the electric organs are capable of generating strong electric shock to paralyze the prey.
 (B) Bony fishes use pectoral, pelvic, dorsal anal and caudal fins in swimming.
 (C) Amphibian skin is moist and has thick scales.
 (D) Birds are poikilothermous animals.

(E) The most unique mammalian characteristic is the presence of milk producing mammary glands by which the young ones are nourished.

- (1) (A), (B) and (C) are true; (D) and (E) are false
 (2) (A), (B) and (E) are true; (C) and (D) are false
 (3) (A), (D) and (E) are true; (B) and (C) are false
 (4) (A), (B) and (D) are false; (C) and (E) are true

4. Among which of the animals urinary bladder is absent? (AIIMS-2017)

- (1) Frog (2) Crow (3) Snake (4) Camel

5. Which all belong to the same phylum? (AIIMS-I-2018)

(1)	Mammalia	<i>Balaenoptera, Delphinus, Rattus, Felis</i>
(2)	Porifera	<i>Euspongia, Scypha, Pennatula</i>
(3)	Arthropoda	<i>Crab, Limulus, Aplysia, Cockroach</i>
(4)	Coelenterata	<i>Hydra, Gorgonia, Obelia, Sycon</i>

6. Which of the following option is correct? (AIIMS-II-2018)

(1)	Osteichthyes	4 pairs of gill slits covered by operculum
(2)	Chondrichthyes	6-15 pairs of gill slits
(3)	Arthropoda	Metamerism and excretion by nephridia
(4)	Platyhelminthes	Bilateral symmetry & coelomate e.g., <i>Taenia</i> and <i>Fasciola</i>

7. Choose the correct option— (AIIMS-II-2018)

- (1) *Macropus* - hair on skin & pinna present (2) *Pleurobrachia* - Cnidoblast
 (3) *Pristis* - Guitar fish (4) *Scoliodon* - Cat fish

8. Choose the correct match : (AIIMS-II-2018)

- (1) Aves – Pneumatic bones (2) Reptiles – 4 chambers heart
 (3) Amphibia – Scales on body (4) Osteichthyes – Perisistant notochord

9. Which of the following is correct (AIIMS-II-2018)

- (1) *Macropus* – Ear pinna, body hairs, 4 chambered heart
 (2) *Pavo* – Long bones ossified, fore limbs modified to wings
 (3) *Ichthyophis* – covering on eyelids, Scales present
 (4) *Limulus* – chitinous exoskeleton, 3 pair of legs

10. Select the incorrect matching – (AIIMS-III-2018)

- (1) Annelida - *Nereis, Hirudinaria, Lumbricus*
 (2) Echinodermata - *Echinus, Cucumaria, Asterias*
 (3) Reptilia - *Hemidactylus, Ophiosaurus, Chelone*
 (4) Mammalia - *Betta, Rattus, Felis*

11. Select the correct option for Reptilia – (AIIMS-III-2018)
- (1) 4 chambered heart - *Chelone* (2) Tympanum represents ear - *Crocodile*
(3) External ear present - *Ophiosaurus* (4) Dry and scaly skin - *Salamandra*
12. Select the option with correct matching of animal group and its examples – (AIIMS-IV-2018)
- (1) Mammalian - *Platypus*, *Rattus*, *Camelus*, *Pavo*
(2) Aves - *Neophron*, *Struthio*, *Sphenodon*, *Passer*
(3) Reptilia - *Calotes*, *Heloderma*, *Uromastix*, *Draco*
(4) Amphibia - *Bufo*, *Hyla*, *Rhacophorus*, *Ophiosaurus*

Answers

EXERCISE - 1

SECTION - A

1. (4)	2. (2)	3. (1)	4. (2)	5. (3)	6. (1)	7. (2)
8. (4)	9. (2)	10. (1)	11. (1)	12. (4)	13. (4)	14. (2)
15. (4)	16. (2)	17. (1)	18. (2)	19. (3)	20. (4)	21. (3)
22. (4)						

SECTION - B

1. (4)	2. (4)	3. (4)	4. (3)	5. (2)	6. (2)	7. (3)
8. (3)	9. (2)	10. (1)	11. (4)	12. (1)	13. (2)	14. (2)
15. (4)	16. (1)	17. (3)	18. (4)	19. (3)	20. (4)	21. (1)
22. (3)	23. (4)	24. (2)	25. (1)	26. (3)	27. (2)	28. (1)
29. (4)	30. (2)					

SECTION - C

1. (2)	2. (2)	3. (3)	4. (1)	5. (2)	6. (1)	7. (3)
8. (3)	9. (4)					

SECTION - D

1. (4)	2. (2)	3. (4)	4. (4)	5. (1)	6. (4)	7. (3)
8. (2)	9. (1)	10. (1)	11. (1)	12. (2)	13. (3)	14. (4)
15. (3)	16. (3)	17. (3)	18. (2)	19. (3)	20. (4)	21. (1)
22. (2)	23. (4)	24. (3)	25. (3)	26. (2)	27. (3)	28. (4)
29. (3)	30. (4)					

SECTION - E

1. (3)	2. (4)	3. (3)	4. (1)	5. (4)	6. (3)	7. (4)
8. (3)	9. (1)	10. (3)	11. (3)	12. (1)		

SECTION - F

1. (4)	2. (1)	3. (4)	4. (1)	5. (4)	6. (4)	7. (4)
8. (3)	9. (2)	10. (1)	11. (2)	12. (1)	13. (4)	14. (3)
15. (1)	16. (4)	17. (4)	18. (1)	19. (2)	20. (1)	21. (4)
22. (1)	23. (3)					

MISCELLANEOUS QUESTIONS

1. (4)	2. (3)	3. (4)	4. (1)	5. (2)	6. (4)	7. (2)
8. (1)	9. (2)	10. (2)	11. (3)	12. (4)	13. (2)	14. (1)
15. (1)	16. (4)	17. (1)	18. (3)	19. (3)	20. (3)	21. (1)

EXERCISE - 2

1. (4)	2. (2)	3. (2)	4. (4)	5. (2)	6. (4)	7. (1)
8. (3)	9. (4)	10. (2)	11. (4)	12. (3)	13. (2)	14. (1)
15. (1)	16. (1)	17. (4)	18. (1)	19. (3)	20. (2)	21. (3)
22. (1)	23. (3)	24. (1)	25. (3)	26. (4)	27. (3)	28. (3)
29. (1)	30. (2)	31. (2)	32. (4)	33. (3)	34. (1)	35. (4)
36. (3)	37. (1)	38. (2)	39. (2)	40. (2)	41. (3)	42. (2)

EXERCISE - 3

PART - I

1. (4)	2. (4)	3. (3)	4. (1)	5. (1)	6. (3)	7. (4)
8. (2)	9. (2)	10. (4)	11. (2)	12. (2)	13. (1)	14. (3)
15. (2)	16. (4)	17. (3)	18. (2)	19. (3)	20. (3)	21. (4)
22. (3)						

PART - II

1. (2)	2. (4)	3. (2)	4. (2)	5. (1)	6. (1)	7. (1)
8. (1)	9. (1)	10. (4)	11. (2)	12. (3)		

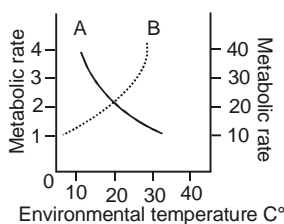
Self Practice Paper (SPP)

1. Endoskeleton is cartilaginous in
(1) mollusca (2) osteichthyes (3) dipnoi (4) elasmobranches
2. *Gambusia* is a
(1) parasitic fish (2) pest of fishes
(3) a fish, predator of mosquito larvae (4) mosquito, spreading yellow fever
3. A frog lives in water or near water because
(1) it can get its food easily in water
(2) its hind limbs are webbed and help in swimming
(3) it can see through its transparent eye lids while swimming
(4) it respire through the skin
4. Common trait amongst fishes, amphibians and reptiles is
(1) laying of eggs (2) shelled eggs (3) gills (4) scales
5. Which one of the following pairs is correctly matched?
(1) *Sphenodon* - New Zealand (2) Ostrich - New Zealand
(3) Kiwi - Australia (4) Platypus - South America
6. Voluntary breaking of tail occurs in
(1) snake (2) lizard (3) leech (4) cockroach
7. What is true about birds?
(1) They possess a diaphragm separating thorax from abdomen
(2) They usually maintain a body temperature which is relatively lower than that of mammals
(3) They mostly, excrete urea
(4) They have beaks but not teeth
8. What is common among ostrich, penguin and kiwi?
(1) These are flightless birds (2) These are running birds
(3) These are migratory birds (4) These have four toes in each of their feet
9. Which one of the following is an exclusive character of class Mammalia?
(1) Homiothermy (2) 4-chambered heart
(3) Muscular diaphragm (4) Nucleated RBCs
10. Kangaroo belongs to
(1) monotremata (2) prototheria (3) marsupialia (4) insectivora
11. Which one has a poison gland?
(1) Wall lizard (2) Scoliodon (3) Rat snake (4) Male platypus
12. In most mammals, testes are located in scrotal sacs for
(1) sperm development (2) sex differentiation
(3) independent functioning of kidney (4) more space to visceral organs
13. Heart of mammal is
(1) one chambered (2) two chambered (3) three chambered (4) four chambered

14. Characters of which group are present in all chordates in some stage or the other of their life cycle?
- (1) Gill clefts, vertebral column and notochord
 - (2) Mammary glands, hairs and gill clefts
 - (3) Notochord, scales and dorsal tubular nervous system
 - (4) Notochord, gill clefts and dorsal tubular central nervous system

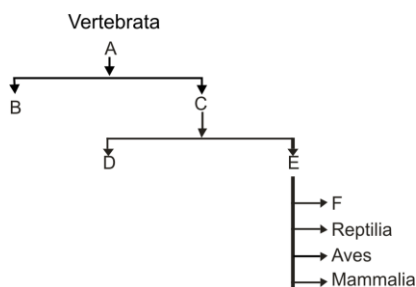
15. Vertebral column is derived from the
- (1) notochord
 - (2) dorsal nerve cord
 - (3) ventral nerve cord
 - (4) outgrowth of cranium

16. Curves A and B in the following graph represent



- (1) A - cat B - lizard
 - (2) A - elephant B - mouse
 - (3) A - Bird B - mouse
 - (4) A - fish B - frog
17. How many of the followings is/are true fish?
Devil fish, Sea horse, Star fish, Cuttle fish, Cray fish, Hag fish, Dog fish, Silver fish.
- (1) 1 (2) 2 (3) 3 (4) 4
18. The tadpoles of frog can be made to grow as giant tadpoles provided they are
- (1) reared on a diet rich in egg yolk
 - (2) administered large amounts of thyroxine
 - (3) administered antithyroid substance like thiourea
 - (4) reared on a diet rich in both egg yolk and glucose
19. Select the incorrect difference between cartilaginous and bony fishes.
- | Cartilaginous fishes | | Bony fishes |
|---------------------------------|---|--------------------------------|
| (1) Operculum absent | — | Operculum present |
| (2) Fertilization internal | — | Fertilization usually external |
| (3) Possess separate gill slits | — | Possess 4 pair of gills |
| (4) Mostly oviparous | — | Mostly viviparous |
20. *Pheretima*, *Planaria*, *Periplanata*, *Peripatus*, *Fasciola*, *Pleurobranchia*, *Balanoglossus*
How many examples belong to schizocoelomata ?
- (1) 3 (2) 4 (3) 5 (4) 6

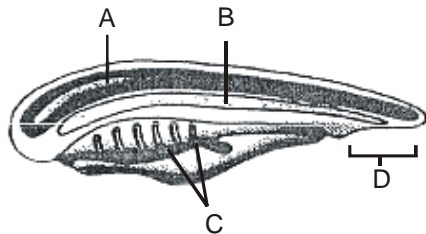
21. Choose the correct option for the following flow chart



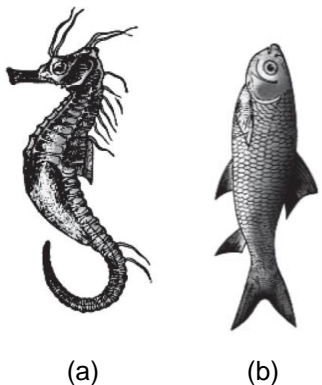
- (1) Vertebrates are divided into super phylum (A) Agnatha as (C) & Gnathostomata as (B)
 (2) *Petromyzon* belongs to class (B) Agnatha
 (3) D,E,F all are poikilothermal animals.
 (4) Members of super class (D) pisces are aquatic & limbless
22. Urochordata and cephalochordata are collectively referred to as
 (1) non-chordata (2) vertebrata (3) protochordata (4) All of these
23. (a) Marine habitat with streamlined body
 (b) Cartilaginous endoskeleton
 (c) Mouth ventral
 (d) Claspers in males
 (e) Notochord is persistent throughout life
 How many organisms (those are given below) possess the above characters?
 Dogfish, Saw fish, Flying fish, Fighting fish, Star fish, *Trygon*, *Torpedo*, Rohu, Katla, Magur
 (1) 3 (2) 4 (3) 6 (4) 7
24. How many correct statements are given below?
 (a) All the chordata are vertebrata but all the vertebrata are not chordata
 (b) Tissue grade body organization showing animals are radially symmetric
 (c) All the radially symmetric organism are diploblastic
 (d) All the diploblastic organism are acoelomates
 (e) All the pseudocoelomates are organ system grade body organization showing organisms.
 (1) 0 (2) 1 (3) 2 (4) 3
25. Select correct match.
- | | | |
|-----------------------|---|-----------------------|
| A. <i>Bufo</i> | – | 1. Salamander |
| B. Frog | – | 2. <i>Rana</i> |
| C. <i>Hyla</i> | – | 3. Limbless amphibian |
| D. <i>Salamandra</i> | – | 4. Tree frog |
| E. <i>Ichthyophis</i> | – | 5. Toad |
- (1) A–2, B–5, C–4, D–1, E–3 (2) A–5, B–2, C–4, D–1, E–3
 (3) A–2, B–4, C–5, D–1, E–3 (4) A–5, B–4, C–2, D–1, E–3
26. Which of the following is correct about cyclostomes?
 (1) Ectoparasitic on fishes during their adult stage
 (2) Skin with scales and unicellular mucous glands
 (3) One kidney for excretion
 (4) Two chambered heart and 4 pairs of gills slits for respiration
27. Select the correct match.

- (1) *Betta* – Fighting fish
 (2) *Hippocampus* – Flying fish
 (3) *Pterophyllum* – Fighting fish
 (4) *Clarias* – Labeo

28. Animals belonging to phylum Chordata are fundamentally characterised by the presence of structure noted as A, B, C and D. Identify A, B, C and D.



- (1) A - Notochord, B- Nervecord, C - Gill slits, D - Post-anal part
 (2) A - Nerve cord, B - Notochord, C - Gill slits, D - Post-anal part
 (3) A- Nerve cord, B - Notochord, C - Post-anal part, D - Gill slits
 (4) A - Nerve cord, B - Gill slits, C - Notochord, D - Post-anal part
29. Which of the following feature show progressive modification throughout the diversity without exception?
 (1) Body organization (2) Symmetry (3) Circulatory system (4) Segmentation
30. Observe the following diagrams and pick the correct option.



- (1) (1) and (2) both are Cartilaginous fishes
 (2) (1) and (2) both are Bony fishes
 (3) (1) is Bony fish while (2) is Cartilaginous fish
 (4) (1) is Cartilaginous fish while (2) is Bony fish
31. Water from the two tanks shown in the diagram was tested 3 hours after they were stocked with indicated animals. The predominant nitrogenous waste detected in **Tank-I** and **Tank-II** respectively would be
- | Tank I | Tank II |
|----------|---------|
| Tadpoles | Frogs |
- (1) urea in both (2) ammonia and urea (3) ammonia in both (4) urea and uric acid

32. Which of the following statement is correct?

I. In Urochordates like *Ascidia*, *Salpa*, *Doliolum* possess notochord only in their larva's tail.

II. In Cephalochordates like *Branchiostoma* (Amphioxus or Lancelet) notochord extends from anterior to posterior region of body and persists throughout the life.

III. All vertebrates are chordates but all chordates are not vertebrates

IV. Notochord is replaced by vertebral column in vertebrates

(1) All are correct

(2) Only II and IV are correct

(3) All are wrong

(4) Only II is wrong

33. I. Body is covered by dry and cornified skin, epidermal scales or scutes.

II. They have no external ear pinna

III. Crawling / creeping habit

IV. 3 chambered heart

The above characters are associated with

(1) Reptile

(2) Bird

(3) Amphibia

(4) Mammals

34. Select the odd one

(1) *Aptenodytes*

(2) *Pavo*

(3) *Calotes*

(4) *Psittacula*

35. *Petromyzon* (Lamprey) and *Myxine* (Hag fish) are marine but migrate for spawning to fresh water, after that they die within few days. They belong to

(1) Chondrichthyes

(2) Osteichthyes

(3) Agnatha / Cyclostomata

(4) Amphibia

36. Which type of Respiratory organ is/are found in amphibians

(1) gills

(2) lungs

(3) skin

(4) all of the above

37. Peculiarity of fish heart is that it has

(1) arterial blood only

(2) venous blood only

(3) partly arterial and partly venous blood

(4) no blood at all

38. Which one of the following in birds, indicates their reptilian ancestry?

(1) Four-chambered heart

(2) Two special chambers crop and gizzard in their digestive tract

(3) Eggs with a calcareous shell

(4) Scales on their hind limbs

39. Bilateral symmetry is seen in the body organisation of

(1) only chordates

(2) vertebrates only

(3) vertebrates, annelids, arthropods and cnidarians

(4) annelids, arthropods and vertebrates

40. In which of the following the heart is not ventral in position
 (1) fish (2) frog (3) lamprey (4) crabs
41. What is the zoological name of Indian peacock, the national bird:
 (1) *Passer* (2) *Pavo* (3) *Columba* (4) *Psittacula*
42. Air bladder is present in
 (1) Dog (2) Flying fish (3) Hag fish (4) Electric fish
43. Which one of the following is a chordate but not a vertebrate
 (1) *Scoliodon* (2) Salamander (3) *Amphioxus* (4) Snake
44. Mammals giving rise to immature young ones and nursing them in a pouch are
 (1) Monotremes (2) marsupials (3) Primates (4) Carnivores
45. The greatest evolutionary change that enabled the land vertebrates to be completely free from water, was the development of
 (1) four appendages (2) lungs
 (3) cleidoic eggs (4) four chambered heart

SPP Answers

- | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. | (4) | 2. | (3) | 3. | (4) | 4. | (1) | 5. | (1) | 6. | (2) | 7. | (4) |
| 8. | (1) | 9. | (3) | 10. | (3) | 11. | (4) | 12. | (1) | 13. | (4) | 14. | (4) |
| 15. | (1) | 16. | (1) | 17. | (2) | 18. | (3) | 19. | (4) | 20. | (1) | 21. | (4) |
| 22. | (3) | 23. | (2) | 24. | (4) | 25. | (2) | 26. | (1) | 27. | (1) | 28. | (2) |
| 29. | (1) | 30. | (2) | 31. | (2) | 32. | (1) | 33. | (1) | 34. | (3) | 35. | (3) |
| 36. | (4) | 37. | (2) | 38. | (4) | 39. | (4) | 40. | (4) | 41. | (2) | 42. | (2) |
| 43. | (3) | 44. | (2) | 45. | (3) | | | | | | | | |