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| Division | 11th |
| Subject | Biology |
| Chapter | Animal Kingdom |
| Author | Anand |
| Category | 1 |

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| Consider following features.  Organ system level of organisation  Bilateral symmetry  True coelomates with segmentation of body  Select the correct option of animal groups which possess all the above characteristics.  2019 |
| Annelida, Mollusca and Chordata |
| Annelida, Arthropoda and Chordata |
| Annelida, Arthropoda and Mollusca |
| Arthropoda, Mollusca and Chordata |
| b |
| 5, 6 and 10 th levels |
| Mollusca shows organ system level of organisation with unsegmented body (except Neopilina which is a segmented mollusc) having distinct head, muscular foot and visceral hump. They usually show bilateral symmetry but some molluscs (example Pila) become asymmetrical due to torsion. |
| Levels of organisation |

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| Which of the following animals are true coelomates with bilateral symmetry?  Odisha NEET 2019 |
| Adult Echinoderms |
| Aschelminthes |
| Platyhelminthes |
| Annelids |
| d |
| 6 th levels |
| Mollusca shows organ system level of organisation with unsegmented body (except Neopilina which is a segmented mollusc) having distinct head, muscular foot and visceral hump. They usually show bilateral symmetry but some molluscs (example Pila) become asymmetrical due to torsion. |
| Levels of organization |

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| Which one of the following kinds of animals are triploblastic?  2010 |
| Flatworms |
| Sponges |
| Ctenophores |
| Corals |
| a |
| Three embryonic germ layers |
| Triploblastic is a condition which describes an animal having a body composed of three embryonic germ layers: the ectoderm, mesoderm and endoderm. Most multicellular animals belonging to Phylum Platyhelminthes to Phylum Chordata are triploblastic. Ctenophores, sponges and corals are diploblastic. |
| Triploblastic organisation |

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| Which one of the following statements about certain given animals is correct?  2010 |
| Roundworms (Aschelminthes) are pseudocoelomates. |
| Molluscs are acoelomates. |
| Insects are pseudocoelomates. |
| Flatworms (Platyhelminthes) are coelomates. |
| a |
| False coelom |
| Acoelomates are animals having no body cavity or coelom. Examples are poriferans, coelenterates, ctenophora, platyhelminthes. In pseudocoelomates, body space is pseudocoelom or false coelom. Examples are aschelminthes. In coelomates, body space is a true coelom enclosed by mesoderm on both sides. Remaining phyla from annelida to arthropoda are coelomates. Molluscs and insects are coelomates while flatworms are acoelomates. |
| Coelom |

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| Which one of the following groups of animals is bilaterally symmetrical and triploblastic?  2009 |
| Aschelminthes (roundworms) |
| Ctenophores |
| Sponges |
| Coelenterates (cnidarians) |
| a |
| False coelom |
| Aschelminthes is a phylum consisting of pseudocoelomates. These are mostly aquatic, free living or parasitic. Their body is slender, bilaterally symmetrical and triploblastic. |
| Triploblastic |

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| Metameric segmentation is the characteristic of |
| mollusca and chordata |
| platyhelminthes and arthropoda |
| echinodermata and annelida |
| annelida and arthropoda. |
| d |
| 5 and 6 th level |
| The term metamerism refers to a linear repetition of parts in an animal body. It occurs in three highly organized phyla: Annelida, Arthropoda and Chordata. Each segment is called a metamere, or somite. Segmentation often affects both external and internal structures. Such a condition is called metameric segmentation. In chordates, the segmentation is apparent only in the embryonic stage. In the adult chordates, segmentation is visible in the internal structures, such as vertebrae, ribs, nerves and blood vessels. |
| Segmentation |

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| The animals with bilateral symmetry in young stage and radial pentamerous symmetry in the adult stage, belong to the Phylum  2004 |
| Annelida |
| Mollusca |
| Cnidaria |
| Echinodermata. |
| d |
| Radial and bilateral symmetry |
| Echinoderms are triploblastic animals with organ system level of organisation. Larval forms possess bilateral symmetry while adults have radial symmetry. |
| Triploblastic |

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| Which of the following animals have scattered cells with cell - tissue grade organisation?  2000 |
| Sponge |
| Hydra |
| Liver fluke |
| Ascaris |
| b |
| Liver fluke and ascaris |
| Hydra, has tissue level of organization. Its body is multicellular and the cells occur in 2 distinct layers or tissues of specialized cells. Sponges have cellular level of organization. Liver fluke and Ascaris have organ-system level of organization. |
| Characteristics of Hydra |

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| Coelom is found between  1996 |
| body wall and ectoderm |
| ectoderm and endoderm |
| mesoderm and body wall (endoderm) |
| mesoderm and ectoderm. |
| c |
| Between mesoderm and body wall |
| Coelom is a fluid-filled cavity that forms the main body cavity of vertebrate and most invertebrate animals. It is found between mesoderm and body wall (endoderm). |
| Coelom |

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| Besides annelida and arthropoda, the metamerism is exhibited by 1995 |
| Mollusca |
| Acanthocephalan |
| Cestode |
| chordata |
| d |
| 6 th levels |
| Mollusca shows organ system level of organisation with unsegmented body (except Neopilina which is a segmented mollusc) having distinct head, muscular foot and visceral hump. They usually show bilateral symmetry but some molluscs (example Pila) become asymmetrical due to torsion. |
| Levels of organization |

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| Exoskeleton of arthropods is composed of:  2025 |
| Cutin |
| Cellulose |
| Chitin |
| glucosamine. |
| c |
| 5th level |
| The body of arthropods is covered by chitinous exoskeleton. |
| Levels of organization |

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| In which of the following animals, digestive tract has additional chambers like crop and gizzard?  2025 |
| Corvus, Columba, Chameleon |
| Bufo, Balaenoptera, Bangarus |
| Catla, Columba, Crocodilus |
| Pavo, Psittacula, Corvus |
| d |
| corvus |
| The alimentary canal of birds have additional chambers, the crop and gizzard. Crop stores and softens the food however the gizzard helps in crushing and churning the food, e.g., Pavo, Psittacula, Corvus. |
| Ctenophora |

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| Given below are two statements: one is labelled as Assertion and the other is labelled as Reason(R). Assertion : All vertebrates are chordates but all chordates are not vertebrates.  Reason : Notochord is replaced by vertebral column in the adult vertebrates.  In the light of the above statements, choose appropriate answer from the options given below.  2022 |
| Both and (R) are correct and (R) is not the correct explanation of |
| (A) is correct but (R) is not correct |
| (A) is not correct but (R) is correct |
| Both and (R) are correct but (R) is incorrect explanation of |
| a |
| Characteristics of chordata |
| The members of subphylum Vertebrata possess notochord during the embryonic period. The notochord is replaced by a cartilaginous or bony vertebral column in the adult. Thus, all vertebrates are chordates but all chordates are not vertebrates. |
| Characteristics of chordata |

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| Which one of the following organisms bears hollow and pneumatic long bones? 2021 |
| Ornithorhynchus |
| Neophron |
| Hemidactylus |
| Macropus |
| b |
| Vulture |
| Endoskeleton of Neophron (vulture) that belongs to Class Aves is fully ossified (bony) and bears hollow and pneumatic long bones. |
| Chordata |

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| Read the following statements.   1. Metagenesis is observed in helminths. 2. Echinoderms are triploblastic and coelomate animals. 3. Round worms have organ-system level of body organization. 4. Comb plates present in ctenophores help in digestion. 5. Water vascular system is characteristic of echinoderms.   Choose the correct answer from the options given below. 2021 |
| (II), (III) and (V) are correct |
| (III), (IV) and (V) are correct |
| (I), (II) and (III) are correct |
| (I), (IV) and (V) are correct |
| A |
| Comb plates |
| Metagenesis is observed in Obelia which belongs to the Phylum Coelenterata. Comb plates present in ctenophores help in locomotion. |
| Ctenophora |

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| Bilaterally symmetrical and acoelomate animals are exemplified by 2020 |
| Ctenophora |
| Platyhelminthes |
| Aschelminthes |
| annelida. |
| b |
| Bilaterally symmetrical |
| Platyhelminthes are bilaterally symmetrical, triploblastic and acoelomate animals with organ level of organisation. |
| Characteristics of platyhelminthes |

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| Which of the following statements are true for the Phylum Chordata?   1. In Urochordata, notochord extends from head to tail and it is present throughout their life. 2. In Vertebrata, notochord is present during the embryonic period only. 3. Central nervous system is dorsal and hollow. 4. Chordata is divided into 3 subphyla Hemichordata, Tunicata and Cephalochordata.   2020 |
| (IV) and (III) |
| (III) and (I) |
| (I) and (II) |
| (II) and (III) |
| D |
| (II) and (III) |
| In Urochordata, notochord is present only in larval tail. Phylum Chordata is divided into three subphyla : Urochordata or Tunicata, Cephalochordata and Vertebrata. |
| Urochordata; Characteristics |

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| Which of the following animals does not undergo metamorphosis? 2018 |
| Earthworm |
| Tunicate |
| Moth |
| Starfish |
| a |
| Immature larva to adult |
| Metamorphosis is the process of transformation of an immature larva into an adult form in two or more distinct stages. Animals that undergo metamorphosis are said to have indirect development, e.g., tunicates, moth, starfish, etc. In case of earthworm, development is direct which means no larval stage is present and hence, there is no metamorphosis. |
| Examples of echinodermata |

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| Identify the vertebrate group of animals characterised by crop and gizzard in its digestive system.  2018 |
| Amphibia |
| Reptilia |
| Aves |
| Osteichthyes |
| c |
| Birds use these specialized organs to help them digest food efficiently |
| The correct option is aves; The pharynx, oesophagus, crop, proventriculus, gizzard, small intestine, and large intestine make up the digestive system of most aves. The stomach's proventriculus and gizzard are two separate organs. Food enters the crop through the oesophagus. Then it enters the gizzard. |
| Characteristics of reptilia |

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| Which one of these animals is not a homeotherm?  2018 |
| Macropus |
| Chelone |
| Camelus |
| Psittacula |
| b |
| Chelone |
| Homeotherms are the animals that maintain constant body temperature, irrespective of surrounding temperature by metabolic activity, e.g., birds and mammals. Turtle (Chelone) belongs to Class Reptilia and is poikilotherm or cold blooded. |
| Characteristics of reptilia |

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| Important characteristic that hemichordates share with chordates is  2017 |
| ventral tubular nerve cord |
| pharynx with gill slits |
| pharynx without gill slits |
| absence of notochord. |
| b |
| Pharynx with gill slits |
| An important characteristics that hemichordates and chordates share is presence of pharyngeal gill slits. Gill slits are dorsal in position in hemichordates whereas they are lateral in chordates. |
| Characteristics of protochordata |

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| Which among these is the correct combination of aquatic mammals?  2017 |
| Dolphins, Seals, Trygon |
| Whales, Dolphins, Seals |
| Trygon, Whales, Seals |
| Seals, Dolphins, Sharks |
| b |
| Aquatic animals |
| Whales, dolphins and seals are examples of aquatic mammals. Trygon and sharks are cartilaginous fishes. |
| Examples of mammalia |

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| Which of the following represents order of 'Horse'?  2017 |
| Perissodactyla |
| Caballus |
| Ferus |
| Equidae |
| a |
| Equidae |
| Perissodactyla represents the order of horse. Equidae is the family, caballus is the subspecies whereas . ferus is the species of horse. |
| Chondrichthytes |

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| In case of poriferans, the spongocoel is lined with flagellated cells called  2017 |
| Oscula |
| Choanocytes |
| mesenchymal cells |
| ostia. |
| b |
| Flagellated cells -in body cavity |
| Spongocoel is the central body cavity of the sponges. It is lined by highly specialised flagellated cells called choanocytes. |
| Characteristics of porifera |

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| Choose the correct statement.  NEET-II 2016 |
| All mammals are viviparous. |
| All cyclostomes do not possess jaws and paired fins. |
| All reptiles have a three-chambered heart. |
| All pisces have gills covered by an operculum. |
| b |
| Cyclostomes |
| Ornithorhynchus and Tachyglossus are oviparous mammals. Crocodile is a reptile which possesses four chambered heart. In cartilaginous fish (except Chimaera) gills are not covered by an operculum. |
| Characteristics of mammals |

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| Which one of the following characteristics is not shared by birds and mammals?  NEET-I 2016 |
| Viviparity |
| Warm blooded nature |
| Ossified endoskeleton |
| Breathing using lungs |
| a |
| Oviparity |
| All birds are oviparous while all mammals except Ornithorhynchus (duck billed platypus) and Echidna or Tachyglossus (spiny anteater) are viviparous. |
| Characteristics of mammals |

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| Which of the following characteristic features always holds true for the corresponding group of animals?  NEET-I 2016 |
| Possess a mouth with an Chordata upper and a lower jaw |
| 3-chambered heart with Reptilia one incompletely divided ventricle |
| Cartilaginous endoskeleton Chondrichthyes |
| Viviparous Mammalia |
| c |
| Agnatha |
| Phylum Chordata includes both jawless vertebrates (Agnatha) and jawed vertebrates (Gnathostomata). Crocodile of Class Reptilia has four chambered heart with two auricles and two ventricles. Duck billed platypus and spiny anteater are oviparous mammals. |
| Characteristics of chordata |

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| Which of the following features is not present in the Phylum Arthropoda?  NEET-I 2016 |
| Parapodia |
| Jointed appendages |
| Chitinous exoskeleton |
| Metameric segmentation |
| a |
| Hollow structures enclosing coelom |
| Parapodia are flattened, fleshy, vertical flap-like outgrowths of body wall found in annelids on lateral sides of trunk segments. These are hollow structures enclosing coelom which is continuous with that of trunk segments. These serve the dual purpose of locomotion and respiration. |
| Characteristics of arthropoda |

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| Body having meshwork of cells, internal cavities lined with food filtering flagellated cells and indirect development are the characteristics of Phylum  2015 |
| Mollusca |
| Protozoa |
| Coelenterata |
| Porifera. |
| d |
| Inner layer of specialized cells |
| Phylum Porifera (the sponges) has cellular level of body organisation, with inner cellular layer consisting of highly specialised flagellated cells called choanocytes (or collar cells). The development in this phylum is indirect as it includes a free swimming larva called amphiblastula or parenchymula for dispersal of the species. |
| Characteristics of porifera |

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| Metagenesis refers to  2015 |
| occurrence of a drastic change in form during post-embryonic development |
| presence of a segmented body and parthenogenetic mode of reproduction |
| presence of different morphic forms |
| alternation of generation between asexual and sexual phases of an organism. |
| d |
| obelia |
| An alternation of generation between asexual and sexual phases of an organism is referred to as metagenesis. E.g., in Obelia (a coelenterate), polyps reproduce asexually and medusae reproduce sexually. |
| Basics of classification |

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| A jawless fish, which lays eggs in fresh water and whose ammocoetes larvae after metamorphosis return to the ocean is  2015 |
| Neomyxine |
| Petromyzon |
| Eptatretus |
| Myxine. |
| b |
| Cyclostomata |
| Petromyzon (Lamprey) belongs to the Class Cyclostomata of Phylum Chordata. It is a jawless fish which lays eggs in fresh water. The eggs hatch in about 3 weeks into minute transparent larvae called ammocoetes. After metamorphosis, the young lampreys swim down to the sea where they remain for 3 or 4 years before reaching maturity, when they once again migrate to streams or rivers to spawn and die. Gonads become mature at that time when adults return to rivers for spawning. |
| Examples of chordata |

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| Which of the following endoparasites of humans does show viviparity?  2015 Cancelled |
| Trichinella spiralis |
| Ascaris lumbricoides |
| Ancylostoma duodenale |
| Enterobius vermicularis |
| a |
| It is nematode parasite |
| Trichinella spiralis is a minute nematode parasite that shows viviparity i.e., produces live youngs (larvae) not eggs. The adults of T. spiralis live in the human small intestine, where the females release large numbers of larvae. These larvae bore through the intestine and can cause trichinosis or trichiniasis which has symptoms like diarrohea, nausea, vertigo, pain in limbs and fever etc.  Humans get infected after eating imperfectly cooked meat infected with the parasite's larval cysts. |
| Examples of nematoda |

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| Which of the following animals is not viviparous?  2015 Cancelled |
| Platypus |
| Whale |
| Flying fox (Bat) |
| Elephant |
| a |
| Eastern Australia |
| Duck-billed platypus is an egg laying mammal. It is found in the rivers in Eastern Australia and Tasmania. It is a beaver like monotreme about long and well adapted to live in water. Usually, two eggs are laid at a time. The female curls around them for incubation and remains inactive for about two weeks. Newly hatched young ones are very immature, naked, blind and each is long. |
| Examples of mammals |

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| Which of the following characteristics is mainly responsible for diversification of insects on land?  2015 Cancelled |
| Exoskeleton |
| Eyes |
| Segmentation |
| Bilateral symmetry |
| a |
| Protect and support |
| Exoskeleton made of cuticle has enabled insects to live on land and to diversify to almost all the possible habitats. It gives them protection, support and also helps to prevent desiccation. |
| Examples of mammals |

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| Select the taxon mentioned that represents both marine and fresh water species.  2014 |
| Echinoderms |
| Ctenophora |
| Cephalochordata |
| Cnidaria |
| d |
| Sac-like animals |
| Cnidarians are the sac-like animals which are aquatic, mostly marine except a few like Hydra, are fresh water forms. They are the simplest organisms that have attained a tissue level of organization. Members of Ctenophora, Cephalochordata and Echinodermata are exclusively marine. |
| Examples of echinodermata |

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| Planaria possesses high capacity of  2014 |
| Metamorphosis |
| Regeneration |
| alternation of generation |
| bioluminescence. |
| b |
| High degree of generation |
| Planaria possesses high degree of regeneration. Both epimorphosis, in which the missing parts are formed and morphallaxis, in which the whole body can be regenerated from a fragment of the body. |
| Segmentation |

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| A marine cartilaginous fish that can produce electric current is  2014 |
| Pristis |
| Torpedo |
| Trygon |
| Scoliodon. |
| b |
| Discharging electricity |
| Torpedo is a bottom-living marine fish, discharging electricity which is sufficient to stun preys such as small fishes, etc. A pair of electric organs are situated on the dorsal side of the trunk region. Infact the electric organs are the modified lateral muscle-plates innervated by the cranial nerves. |
| Examples of annelida |

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| Which of the following are correctly matched with respect to their taxonomic classification?  House fly, butterfly,  2013 |
| Insecta tse-tse fly, silver fish |
| Echinodermata Spiny anteater, sea |
| Pisces Flying fish, cuttle fish, silver fish |
| Centipede, millipede, - Insecta spider, scorpion |
| a |
| Ant eater |
| Spiny anteater (Echidna) is a prototherian mammal whereas, sea urchins and sea cucumber are echinoderms. Silver fish (Lepisma) is an insect, Cuttle fish (Sepia) is a mollusc and flying fish (Exocoetus) is a bony fish. Centipede is Class Chilopoda, Millipede is Class Diplopoda and Scorpion and Spider are Class Arachnida of Phylum Arthropoda. |
| Examples of arthropodta |

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| Which group of animals belong to the same phylum?  2013 |
| Prawn, Scorpion, Locusta |
| Sponge, Sea anemone, Starfish |
| Malarial parasite, Amoeba, Mosquito |
| Earthworm, Pinworm, Tapeworm |
| a |
| Exoskeletan animals |
| Prawn, Scorpion and Locusta belong to the Phylum Arthropoda. All other animal categories are given below:  Sponge Porifera  Sea anemone Coelenterata  Starfish Echinodermata  Malarial parasite, Amoeba Protozoa  Mosquito Arthropoda  Earthworm Annelida  Pinworm Aschelminthes  Tapeworm Platyhelminthes |
| Examples of arthropoda |

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| One of the representatives of Phylum Arthropoda is  2013 |
| puffer fish |
| flying fish |
| cuttle fish |
| silver fish. |
| d |
| Exoskeletan |
| Phylum Arthropoda is the largest phylum of Animalia which includes insects. Examples include Apis, silkworm, Laccifer, silver fish (Lepisma), locust, etc. Puffer fish and flying fish (Exocoetus) are examples of Superclass Pisces, while cuttle fish (Sepia) belongs to Phylum Mollusca. |
| Examples of arthropoda |

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| The characteristics of Class Reptilia are  Karnataka NEET 2013 |
| body covered with moist skin which is devoid of scales, the ear is represented by a tympanum, alimentary canal, urinary and reproductive tracts open into a common cloaca |
| fresh water animals with bony endoskeleton, airbladder to regulate buoyancy |
| marine animals with cartilaginous endoskeleton, body covered with placoid scales |
| body covered with dry and cornified skin, scales over the body are epidermal, they do not have external ears. |
| d |
| Dry place living |
| Reptiles represent the first class of vertebrates fully adapted for life in dry places on land. The characters of reptiles are in fact a combination of characters that are found in fish and amphibians on one hand and birds and mammals on the other. Their exoskeleton is of horny epidermal scales, shields, plates and scutes. The skin is dry, cornified and devoid of glands. Reptiles lack external ears. |
| Characteristics of repitili |

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| Which one of the following groups of animals reproduces only by sexual means? Karnataka NEET 2013 |
| Cnidaria |
| Porifera |
| Protozoa |
| Ctenophora |
| d |
| Asexual reproduction |
| In ctenophores, asexual reproduction is absent. They are monoecious and fertilization is generally external. In cnidaria, asexual reproduction (budding) is found in the polyps and sexual reproduction is found in the medusa form. Both asexual and sexual reproduction occur in porifera (sponges). Asexual reproduction occurs by budding and gemmules. In protozoa, asexual reproduction takes place by binary fission, budding, etc., and sexual reproduction takes place by syngamy and conjugation. |
| Characteristics of porifera |

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| Which one of the following animals is correctly matched with its one characteristic and the taxon?  Animal Characteristic Taxon  Karnataka NEET 2013 |
| Millipede Ventral nerve Arachnida cord |
| Sea anemone Triploblastic Cnidaria |
| Silver fish Pectoral and Chordata |
| Duckbilled Oviparous Mammalia platypus |
| d |
| Insect-Non chordata |
| Duckbilled platypus is oviparous and belongs to Class Mammalia. Millipede belongs to Class Diplopoda. Sea anemone has two germ layers, i.e., diploblastic. Silver fish (Lepisma) belongs to nonchordata. It is an insect. |
| Characteristics of mammalia |

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| Sharks and dogfishes differ from skates and rays because  Karnataka NEET 2013 |
| gill slits are ventrally placed |
| head and trunk are widened considerably |
| distinct demarcation between body and tail |
| their pectoral fins distinctly marked off from cylindrical bodies. |
| d |
| Cylindrical body |
| Sharks and dogfishes have cylindrical body while skates and rays have both of their pectoral fins fused. It gives a wing-like appearance and are not distinct from body. |
| Examples of mammals |

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| Which one of the following pairs of animals are similar to each other pertaining to the feature stated against them?  Mains 2012 |
| Pteropus and - Viviparity Ornithorhynchus |
| Garden lizard and - Three chambered crocodile heart |
| Ascaris and Ancylostoma |
| Sea horse and Metameric flying fish segmentation Cold blooded (poikilothermal) |
| d |
| Two chambered heart-marine organism |
| Sea horse (Hippocampus) and flying fish (Exocoetus) belong to Class Osteichthyes of super class Pisces. They have two chambered heart (one auricle and one ventricle) and are cold blooded animals. |
| Osteichthyes |

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| Which one of the following categories of animals, is correctly described with no single exception in it?  Mains 2012 |
| All reptiles possess scales, have a three chambered heart and are cold blooded (poikilothermal). |
| All bony fishes have four pairs of gills and an operculum on each side. |
| All sponges are marine and have collared cells. |
| All mammals are viviparous and possess diaphragm for breathing. |
| b |
| Class pisces |
| Heart is generally 3-chambered in reptiles but in crocodile, it is 4-chambered. Sponges are generally marine and have collared cells but few fresh water forms can also be seen like Spongilla. All mammals are viviparous (giving birth to young ones) with an exception, Ornithorhynchus (platypus), which is oviparous (egg laying). |
| Characteristics of reptilia |

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| What will you look for to identify the sex of the following?  2011 |
| Female Ascaris-sharply curved posterior end |
| Male frog- a copulatory pad on the first digit of the hind limb |
| Female cockroach-anal cerci |
| Male shark-claspers borne on pelvic fins |
| d |
| Pelvic fins |
| Tail end is straight in female Ascaris, while tail end is curved ventrally in male Ascaris. Anal cerci is present in both male and female cockroach, while anal style is present only in the male cockroach. The forelimbs in both frogs (male and female) bear small articular pads dorsally at the joints of digit, but the males possess a special nuptial, copulatory pad on ventral side of the first finger of each forelimb. Copulatory pad appears merely as rough patches, but during breeding season, these become thick and sticky. In copulation, the male strongly grips a female under her armpits by means of these pads. Claspers are modified inner edges of pelvic fins in male sharks. |
| Basics of classification |

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| Which one of the following groups of animals is correctly matched with its characteristic feature without any exception? |
| Reptilia: possess 3-chambered heart with an incompletely divided ventricle |
| Chordata: possess a mouth with an upper and a lower jaw |
| Chondrichthyes: possess cartilaginous endoskeleton |
| Mammalia: give birth to young ones |
| c |
| Dry place living |
| Reptiles represent the first class of vertebrates fully adapted for life in dry places on land. The characters of reptiles are in fact a combination of characters that are found in fish and amphibians on one hand and birds and mammals on the other. Their exoskeleton is of horny epidermal scales, shields, plates and scutes. The skin is dry, cornified and devoid of glands. Reptiles lack external ears. |
| Characteristics of repitili |

|  |
| --- |
| Which one of the following statements is totally wrong about the occurrence of notochord, while the other three are correct?  Mains 2011 |
| It is present only in larval tail in ascidian. |
| It is replaced by a vertebral column in adult frog. |
| It is absent throughout life in humans from the very beginning. |
| It is present throughout life in Amphioxus. |
| c |
| Early vertebrate |
| Humans are mammals which are chordates. Phylum Chordata includes animals which possess a notochord either throughout or during early embryonic life. In Ascidia (urochordata), notochord is present only in larval tail while in Amphioxus (cephalochordata), it extends from head to tail region and is persistent throughout their life. It is replaced by a vertebral column in adult frog. |
| Characteristics of notochordata |

|  |
| --- |
| The figures show four animals. Select the correct option with respect to a common characteristic of two of these animals.  (I)  (II)  (III)  (IV)  Mains 2011 |
| (I) and (IV) respire mainly through body wall. |
| (II) and (III) show radial symmetry. |
| (I) and (II) have cnidoblasts for self-defence. |
| (III) and (IV) have a true coelom. |
| d |
| Body cavity -embryonic mesoderm |
| The animals which possess true coelom are called eucoelomates or coelomates. The true coelom is a body cavity which arises as a cavity in embryonic mesoderm. True coelom is of two types; schizocoelom (schizocoel) and enterocoelom (enterocoel). Schizocoelom develops as a split in the mesoderm sheet. It is found in annelids, arthropods, molluscs. In enterocoelom, mesoderm arises from the wall of the embryonic cut of enteron as hollow outgrowths. It occurs in echinoderms and chordates. |
| Coelom |

|  |
| --- |
| One example of animals having a single opening to the outside that serves both as mouth as well as anus is 2010 |
| Octopus |
| Asterias |
| Ascidia |
| Fasciola. |
| d |
| Single body cavity |
| In Fasciola (flatworms) the body has a single cavity with one opening to the outside. The single opening functions as both mouth for ingestion (intake of food) and anus for egestion (undigested food is passed out). It is called blind sac plan. Other examples are coelenterates. |
| Examples of coelentrata |

|  |
| --- |
| Which one of the following statements about all the four of Spongilla, leech, dolphin and penguin is correct?  2010 |
| Penguin is homoiothermic while the remaining three are poikilothermic. |
| Leech is a fresh water form while all others are marine. |
| Spongilla has special collared cells called choanocytes, not found in the remaining three. |
| All are bilaterally symmetrical. |
| c |
| Water sponge |
| Spongilla is a common, widely distributed fresh water sponge belonging to Phylum Porifera. Canal system in Spongilla is with choanocytes restricted to small rounded chambers. It is not found in leech, dolphin and penguin. |
| Examples of porifera |

|  |
| --- |
| In which one of the following organisms its excretory organs are correctly stated?  Mains 2010 |
| Humans - Kidneys, sebaceous glands and tear glands |
| Earthworm - Pharyngeal, integumentary and septal nephridia |
| Cockroach - Malpighian tubules and enteric caeca |
| Frog - Kidneys, skin and buccal epithelium |
| b |
| Earthworm - Pharyngeal, integumentary and septal nephridia |
| Nephridia is the excretory organ of the earthworm. Earthworms have three types of nephridial structures called as septal, integumentary and pharyngeal nephridia. These three nephridial structures are present on different positions in the body and also vary in structures. Septal and pharyngeal nephridia are both enteronephric i.e., nitrogen products are expelled in gut. Integumentary nephridia is exonephric i.e., nitrogen waste products are directly discharged outside. |
| Classification of animals |

|  |
| --- |
| Crocodile and penguin are similar to whale and dogfish in which one of the following features?  Mains 2010 |
| Possess a solid single stranded central nervous system |
| Lay eggs and guard them till they hatch |
| Possess bony skeleton |
| Have gill slits at some stage |
| d |
| Paired pharyngeal gills |
| Animals belonging to Phylum Chordata are fundamentally characterised by the presence of a notochord, a dorsal hollow nerve cord and paired pharyngeal gill slits. Crocodile, penguin, whale and dogfish are all chordates. All of them have gill slits or have had it during embryonic development. Thus, paired gill slits are present in these animals at some stage of life. |
| Examples of chordata |

|  |
| --- |
| Which one of the following pairs of animals comprises 'jawless fishes'? |
| Mackerals and rohu |
| Lampreys and hag fishes |
| Guppies and hag fishes |
| Lampreys and eels |
| b |
| Agnatha phylum |
| Agnatha is subphylum or superclass of marine and fresh water vertebrates that lack jaws. They are fish-like animals with cartilaginous skeletons and well-developed sucking mouth parts with horny teeth. The only living agnathans are lampreys and hagfishes (Class Cyclostomata), which are parasites or scavengers. |
| Cyclostomata; examples |

|  |
| --- |
| Which one of the following in birds, indicates their reptilian ancestry? |
| Two special chambers crop and gizzard in their digestive tract |
| Eggs with a calcareous shell |
| Scales on their hind limbs |
| Four-chambered heart |
| c |
| Wings |
| Birds have originated from some ancestral reptilian stalk. These two classes have so many features in common that link the two groups. The evidence of reptilian ancestry of birds is furnished by their comparative anatomy, embryology and palaeontology. One of the features is that all birds have horny epidermal scales confined to the lower parts of their legs and feet, which are exactly like the epidermal scales of the reptiles. |
| Characteristics of repitilia |

|  |
| --- |
| Ascaris is characterized by  2008 |
| presence of true coelom but absence of metamerism |
| presence of true coelom and metamerism (metamerisation) |
| absence of true coelom but presence of metamerism |
| presence of neither true coelom nor metamerism. |
| d |
| Posses pseudocoel |
| Ascaris belongs to the Phylum Nematoda of Superphylum Aschelminthes. They have a cylindrical body without showing any metamerism, a pseudocoel (false coelom) and a complete digestive tract lined by endodermal epithelium. The cuticle covering the body surface bears minute transverse striations giving a pseudosegmented appearance to the worm. |
| Examples of nematoda |

|  |
| --- |
| Which one of the following groups of three animals each is correctly matched with their one characteristic morphological feature? |
| Scorpion, spider, - Ventral solid central cockroach nervous system |
| Cockroach, locust, - Metameric Taenia segmentation |
| Liver fluke, Bilateral symmetry sea anemone, sea cucumber |
| Centipede, prawn, - Jointed appendages sea urchin |
| a |
| Arthropoda |
| Scorpion, spider and cockroach belong to Phylum Arthropoda and are invertebrates. They possess ventral solid central nervous system which consists of a dorsal brain connected with a nerve ring to a double ventral nerve cord. |
| Examples of organisms |

|  |
| --- |
| Which one of the following phyla is correctly matched with its two general characteristics?  2008 |
| Echinodermata - pentamerous radial symmetry and mostly internal fertilization |
| Mollusca - normally oviparous and development through a trochophore or veliger larva |
| Arthropoda - body divided into head, thorax and abdomen and respiration by tracheae |
| Chordata - notochord at some stage and separate anal and urinary openings to the outside. |
| c |
| Largest phylum of animal kingdom |
| Arthropods are the largest phylum of Kingdom Animalia that characteristically possesses an outer body layer - the cuticle. The body is composed of segments usually forming distinct specialized body regions, i.e., head, thorax and abdomen. In them the trachea or windpipe or book lungs are the respiratory organs found in terrestrial forms, which help in respiration. |
| Characteristics of Arthropoda |

|  |
| --- |
| Which one of the following is not a characteristic of Phylum Annelida? |
| Pseudocoelom |
| Ventral nerve cord |
| Closed circulatory system |
| Segmentation |
| a |
| Coelom based property |
| Phylum Annelida comprises invertebrates, which are segmented worms having cylindrical soft bodies showing metameric segmentation. These are triploblastic animals showing bilateral symmetry. A true coelom is present which is filled with coelomic fluid containing cells. Annelids are perhaps the first animals to have a true schizocoelic coelom. |
| Characteristics of Annelida |

|  |
| --- |
| What is common between parrot, platypus and kangaroo?  2007 |
| Toothless jaws |
| Functional post-anal tail |
| Ovoparity |
| Homoiothermy |
| d |
| Maintaining the temperature |
| Homoiothermy is the maintenance by an animal in which body temperature remains constant and does not change with the change of environmental temperature. Homoiothermy occurs in birds and mammals, which are described as endotherms. The heat produced by their tissue metabolism and the heat lost to the environment are balanced by various means to keep body temperature constant: in mammals and in birds. The hypothalamus in the brain monitors blood temperature and controls thermoregulation by both nervous and hormonal means. Thus, parrot (bird), platypus and kangaroo (mammals) are homoiothermic animals. |
| Characteristics of Mammalia |

|  |
| --- |
| What is true about Nereis, scorpion, cockroach and silver fish?  2007 |
| They all possess dorsal heart. |
| None of them is aquatic. |
| They all belong to the same phylum. |
| They all have jointed paired appendages. |
| a |
| Heart |
| Nereis, scorpion, cockroach and silver fish are all invertebrates and thus possess dorsal heart. Nereis is a marine animal while other animals mentioned in the question are terrestrial. Nereis belongs to Phylum Annelida while rest of the animals belong to Phylum Arthropoda. Jointed appendages are present in scorpion, cockroach and silver fish. |
| Examples of arthropoda |

|  |
| --- |
| Biradial symmetry and lack of cnidoblasts are the characteristics of  2006 |
| Hydra and starfish |
| Starfish and sea anemone |
| Ctenoplana and Beroe |
| Aurelia and Paramecium. |
| c |
| Ctenoplana and Beroe |
| Ctenophora is a small phylum of exclusively marine, invertebrate animals. Ctenoplana and Beroe are examples of ctenophora. They have biradial symmetry (a combination of radial and bilateral symmetries). They lack the specialized stinging cells (nematocysts) found in coelenterates, but one species (Haeckelia rubra) incorporates those of its jellyfish prey for its own defense. |
| Characteristics of ctenophora |

|  |
| --- |
| Two common characters found in centipede, cockroach and crab are  2006 |
| book lungs and antennae |
| compound eyes and anal cerci |
| jointed legs and chitinous exoskeleton |
| green gland and tracheae. |
| c |
| Exoskeletan -property |
| Centipede, cockroach and crab all belong to Phylum Arthropoda which are characterized by jointed legs and chitinous exoskeleton. Arthropods have bilaterally symmetrical and metamerically segmented body with haemocoel and open blood vascular system. |
| Examples of arthropoda |

|  |
| --- |
| In which one of the following sets of animals do all the four give birth to young ones? |
| Kangaroo, hedgehog, dolphin, Loris |
| Lion, bat, whale, ostrich |
| Platypus, penguin, bat, hippopotamus |
| Shrew, bat, cat, kiwi |
| a |
| Mammals -examples |
| Kangaroo, hedgehog, dolphin and Loris are mammals and thus give birth to young ones. Ostrich and kiwi are birds that lay eggs. Platypus is a most primitive living mammal that lays eggs. Other animals in the options are mammals and give birth to young ones. |
| Examples of Mammalia |

|  |
| --- |
| Which one of the following is a matching set of a phylum and its three examples?  2006 |
| Porifera - Spongilla, Euplectella, Pennatula |
| Cnidaria - Bonellia, Physalia, Aurelia |
| Platyhelminthes - Planaria, Schistosoma, Enterobius |
| Mollusca - Loligo, Teredo, Octopus |
| d |
| Have softy body tissues |
| Mollusca includes those animals which have soft bodies, usually furnished with a shell. The body is often divided into a head, with eyes or tentacles, a muscular foot and a visceral mass housing the organs. Loligo (squid or sea arrow), Teredo (shipworm), Octopus are some of their examples. In option (a) Spongilla and Euplectella belong to porifera but Pennatula (the sea pen or sea feather) belongs to coelenterata. In option (b) Physalia and Aurelia belong to cnidaria but Bonellia belongs to Phylum Annelida. In option (c) Planaria and Schistosoma belong to platyhelminthes but Enterobius (Pinworm) belongs to aschelminthes. |
| Examples of mollusca |

|  |
| --- |
| What is common about Trypanosoma, Noctiluca, Monocystis and Giardia?  2006 |
| These are all parasities. |
| These are all unicellular protists. |
| They have flagella. |
| They produce spores. |
| b |
| Unicellular organisms |
| Protista is the kingdom of unicellular eukaryotes. The protists include heterotrophs, autotrophs and some organisms that can vary their nutritional mode depending upon environmental conditions. Protists occur in freshwater, saltwater, soil, and as symbionts within other organisms. Trypanosoma, Noctiluca, Monocystis and Giardia are all unicellular protists. |
| Examples of porifera |

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| --- |
| In contrast to annelids the platyhelminthes show |
| absence of body cavity |
| bilateral symmetry |
| radial symmetry |
| presence of pseudocoel. |
| a |
| Not having body cavity |
| Platyhelminthes do not have body cavity so they are acoelomates. In annelids, the body cavity is true and schizocoelous. Both annelids and platyhelminthes have bilateral symmetry. |
| Characteristics of annelida |

|  |
| --- |
| From the following statements select the wrong one. |
| Prawn has two pairs of antennae. |
| Nematocysts are characteristics of the Phylum Cnidaria. |
| Millepedes have two pairs of appendages in each segment of the body. |
| Animals belonging to Phylum Porifera are marine and fresh water. |
| a |
| Crustacean species |
| Prawn has one pair of antennae, one on either side, just below the antennules. They are sensory, excretory and balancing in function. Antennules are attached on either side, below the bases of eye stalks. They are tactile in function. Nematocysts are present in cnidoblasts that act as organs of offence and defence. Millipedes belong to Class Myriapoda. They are called thousand leggers because of possession of numerous walking legs. Body is made up of small head and 40 trunk segments, each with two pairs of jointed legs. Animals belonging to Phylum Porifera are mostly marine and a few are freshwater. |
| Examples of nematodes |

|  |
| --- |
| Which one of the following characters is not typical of the Class Mammalia? |
| Thecodont dentition |
| Alveolar lungs |
| Ten pairs of cranial nerves |
| Seven cervical vertebrae |
| c |
| Neural system |
| Mammals have twelve pair of cranial nerves. Ten pairs of cranial nerves are present in fish and amphibians. Reptiles and birds also have 12 pairs of cranial nerves. |
| Characteristics of mammalia |

|  |
| --- |
| In arthropoda, head and thorax are often used to form cephalothorax, but in which one of the following classes, is the body divided into head thorax and abdomen?  2004 |
| Insecta |
| Myriapoda |
| Crustacea |
| Arachnida and crustacea |
| a |
| Sub phylum of arthropoda |
| Body in arthropoda is segmented. Segments are grouped into 3 forms - head, thorax and abdomen. When head and thorax are fused then they are referred to as cephalothorax. Class Insecta of Phylum Arthropoda have body divided into head, thorax and abdomen. |
| Arthropoda |

|  |
| --- |
| Presence of gills in the tadpole of frog indicates that  2004 |
| fish were amphibious in the past |
| fish evolved from frog-like ancestors |
| frogs will have gills in future |
| frogs evolved from gilled ancestors. |
| d |
| Amphibians -live in both water and terrestial |
| It is universally accepted that amphibians (frogs) have originated from fishes. Resemblance of amphibia to fish is seen in most systems of the body. Both are cold blooded. Fish respire by gills and also tadpole of frog respires by gills. To prevent dessication in air, both usually lay eggs in water. |
| Characteristics of amphibia |

|  |
| --- |
| One of the following is a very unique feature of the mammalian body  2004 |
| Homeothermy |
| four chambered |
| Heart |
| rib cage. |
| b |
| Heart |
| The unique feature of mammals is the presence of diaphragm. It is a membrane that separates thoracic cavity from abdominal cavity. The cavity of other animals is not divided into thoracic and abdominal cavities. Homeothermy, four chambered heart and rib cage are the characters of mammals as well as some other animals also. |
| Characteristics of mammalia |

|  |
| --- |
| Sycon belongs to a group of animals, which are best described as  2003 |
| unicellular or acellular |
| multicellular without any tissue organization |
| multicellular with a gastrovascular system |
| multicellular with a gastrovascular system |
| b |
| Multicellular without organs |
| Sycon, belonging to the Phylum Porifera, are multicellular organisms with cellular level of body organisation. The constituent cells perform their functions more or less independently. No distinct tissue or organs are present in it. |
| Examples of porifera |

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| --- |
| During the life-cycle, Fasciola hepatica (liver fluke) infects its intermediate host and primary host at the following larval stages respectively  2003 |
| redia and miracidium |
| cercaria and redia |
| metacercaria and cercaria |
| miracidium and metacercaria. |
| d |
| Lymnaea, planboris |
| Life cycle of Fasciola hepatica is completed in two hosts. Primary host, in which the adult fluke lives is sheep. While the intermediate host, in which numerous larval stages are passed, is a snail (Lymnaea, Planorbis, etc.). This type of life cycle, involving two different kinds of hosts, is termed digenetic. Miracidium larva is the larval stage involved in life cycle. When suitable conditions become available, the encapsulated embryo, in 4-15 days, differentiates into a miracidium larva. It hatches out and swims in water. Metacercaria develops into adult fluke only inside its definitive host or sheep. The latter gets infection by grazing on leaves and grass blades to which the cysts are attached. Metacercaria survives action of host's gastric juice as its cyst is insoluble in it. Cyst wall finally dissolves in proximal part of intestine and liberates the larva. |
| Examples of porifera |

|  |
| --- |
| Ommatidia serve the purpose of photoreception in  2003 |
| Cockroach |
| Frog |
| Humans |
| sunflower. |
| a |
| Compound eyes |
| In cockroach, the compound eyes are a pair of large, black, kidney-shaped organs situated dorsolaterally on the head, one on either side. Their surface is marked by a large number of hexagonal areas, the facets. Each facet represents a visual unit named ommatidium. The eyes are the organs of sight (photoreception). |
| Characteristics of Arthropoda |

|  |
| --- |
| In which of the following animals nerve cell is present but brain is absent?  2005 |
| Sponge |
| Earthworm |
| Cockroach |
| Hydra |
| d |
| colenterata |
| Hydra which belongs to the Phylum Coelenterata has nerve cells but no brain. Its nervous system consists of nerve cells and their processes. Sensory cells are also present. Sponges do not have nerve cells, they lack nervous system. Earthworm (annelida) has nervous system consisting of a circumenteric nerve ring and a solid, double, midventral nerve cord with ganglia. Cockroach (arthropoda) has the nervous system as that of earthworm. |
| Examples of coelenterata |

|  |
| --- |
| In which of the following, notochord is present in embryonic stage?  2002 |
| All chordates |
| Some chordates |
| Vertebrates |
| Non chordates |
| a |
| Notochord-presents |
| Chordates are the animals that have notochord, a skeletal rod present at some stage in life cycle. In lower vertebrates, notochord persists throughout life while in higher vertebrates it is replaced by vertebral column in adults. Nonchordates never develop notochord, not even in embryonic stage. |
| Characteristics of Chordata |

|  |
| --- |
| In which of the following animals, haemocyanin pigment is found?  2001 |
| Annelida |
| Echinodermata |
| Insecta |
| Mollusca |
| d |
| Copper containing heame |
| In molluscs, blood often has a copper-containing, blue respiratory pigment called haemocyanin. In insects, the blood called haemolymph is colourless. In echinodermates, blood is colourless as it has no respiratory pigment. In annelids, the blood is red with haemoglobin dissolved in plasma. |
| Characteristics of Mollusca |

|  |
| --- |
| In which of the following animals post anal tail is found?  2001 |
| Earthworm |
| Lower invertebrates |
| Scorpion |
| Snake |
| d |
| Scales present on the body |
| Snakes are limbless reptiles with elongated cylindrical body, covered with overlapping scales differentiated into shields and plates and have post anal tail which is long. |
| Characteristics of reptilia |

|  |
| --- |
| In Hydra, waste material of food digestion and nitrogenous waste material are removed respectively from  2001 |
| mouth and mouth |
| body wall and body wall |
| mouth and body wall |
| mouth and tentacles. |
| c |
| Digestion and indigestion by mouth |
| In Hydra indigestible residues are egested through mouth, for there is no anus. Egestion occurs by a sudden squirt due to muscular contraction of body, so that the debris is thrown at a distance. Hydra has neither blood, blood vessels, nor organs of excretion. Due to thinness of body wall and circulation of water in gastrovascular cavity, most cells of body remain freely exposed to the surrounding water. Therefore, excretion of waste nitrogenous matter (chiefly ammonia) occurs directly by diffusion through cell membranes in the outside world. |
| Examples of hydra |

|  |
| --- |
| Cleavage in mammals is  2000 |
| holoblastic equal |
| holoblastic unequal |
| Superficial |
| discoidal. |
| b |
| Holobalstic |
| Cleavage in mammals is holoblastic unequal. Mammals have microlecithal eggs so they have holoblastic cleavage in which the segmentation lines pass through the entire egg, dividing it completely. As the eggs are microlecithal so one would expect that first cleavage will produce two equal blastomeres. But, this is not the case. The two blastomeres produced are unequal which divide further to form 4 unequal blastomeres and this process continues to form a ball of cells called morula. Superficial cleavage occurs in insects and discoidal cleavage occurs in birds. |
| Characteristics of mammalia |

|  |
| --- |
| Similarity in Ascaris lumbricoides and Anopheles stephensi is  2000 |
| sexual dimorphism |
| Metamerism |
| anaerobic respiration |
| endoparasitism. |
| a |
| Different sex in one organism |
| Sexual dimorphism is the difference in the form of individuals of different sexes but of same species. Sexes in Ascaris are separate and sexual dimorphism is well defined. Males are smaller than females. They possess a recurved tail with pre and post anal papillae, a cloaca and a pair of spicules or penial setae. In Anopheles, the ends of maxillary palps in males are club-shaped while in females they are not. |
| Examples of nematodes |

|  |
| --- |
| Which of the following characters is absent in all chordates?  2000 |
| Diaphragm |
| Coelom |
| Pharyngeal gill clefts |
| Dorsal nerve cord |
| a |
| Thoracic and abdominal cavity separation |
| Diaphragm is a membrane that separates thoracic cavity from abdominal cavity. It is present only in mammals. All other chordates do not have diaphragm as their body cavity is not divided into thoracic and abdominal cavities. |
| Characteristics of mammalia |

|  |
| --- |
| What is true for mammalia?  2000 |
| Platypus is oviparous. |
| Bats have feather. |
| Elephant is ovoviviparous. |
| Diaphragm is absent in them. |
| a |
| Viviparous |
| Mammals are viviparous i.e., they give birth to young ones. Protherians (e.g., Platypus) are primitive mammals and lay eggs, so they are oviparous. |
| Characteristics of mammalia |

|  |
| --- |
| Aquatic reptiles are  1999 |
| ureotelic |
| ureotelic in water |
| ammonotelic |
| ureotelic over land. |
| b |
| Urea excretion |
| The waste material of aquatic reptiles chiefly consists of urea, so they are ureotelic. Land forms are uricotelic i.e., their waste material consists of uric acid. |
| Characteristics of Reptilia |

|  |
| --- |
| Temperature changes, in the environment, affect most of the animals which are |
| poikilothermic |
| homoiothermic |
| aquatic |
| desert living. |
| a |
| Temperature dependent |
| Poikilothermic animals are those whose body temperature varies with the temperature of the environment. All animals except birds and mammals are poikilothermic. |
| Characteristics of Mammalia |

|  |
| --- |
| Which of the following is not found in birds?  1999 |
| Pelvic girdle |
| Pectoral girdle |
| Hindlimb |
| Forelimb |
| d |
| For flight; wing is elongated |
| Forelimbs are absent in birds as they are modified into wings for flight. They are attached high on the back to the anterior or thoracic region of the trunk and are very powerful when compared with the size and strength of the bird. Each wing is elongated, flattened and distally pointed with its longitudinal axis at right angles to that of the trunk. |
| Characteristics of aves |

|  |
| --- |
| The long bones are hollow and connected by air passages. They are the characteristics of  1998 |
| Reptilian |
| land vertebrates |
| Aves |
| mammals. |
| c |
| To flight |
| Aves are the animals that fly so their body weight should be less and for this their bones are hollow and connected by air passages. |
| Characteristics of aves |

|  |
| --- |
| Solenocytes are the main excretory structures in  1998 |
| Echinodermates |
| Platyhelminthes |
| Annelids |
| molluscs. |
| b |
| Cilia -example |
| Solenocytes are also called flame cells. It is a cup shaped cell which contains group of cilia and this is the main excretory organ of platyhelminthes. |
| Characteristics of platyhelminthes |

|  |
| --- |
| Most appropriate term to describe the life cycle of Obelia is  1998 |
| Metamorphosis |
| Neoteny |
| Metagenesis |
| all of these. |
| c |
| Polypoid and pelagic phase |
| Obelia belongs to the Phylum Coelenterata. In Obelia, life-cycle includes two clearly defined phases: a fixed polypoid phase (hydroid colony) and a pelagic medusoid phase. Hydroid colony has no gonads and reproduces by asexual budding to give rise to medusae. On the other hand, medusae reproduce exclusively by sexual method (ova and sperms) to give rise to new hydroid colonies. This fact apparently seems to have given rise to the idea of alternation of generations, also called metagenesis. |
| Examples of colenterata |

|  |
| --- |
| The lower jaw in mammals is made up of  1998 |
| Dentary |
| Maxilla |
| Angulars |
| mandible. |
| a |
| Short comma shaped bone |
| Dentary is a membrane bone, present in the lower jaw of the vertebrates, that supports the teeth. In mammals the dentary is the sole bone of the lower jaw. The dentary bone is relatively short comma shaped bone. |
| Characteristics of mammalia |

|  |
| --- |
| What is common among silverfish, scorpion, crab and honey bee?  1997 |
| Jointed legs |
| Metamorphosis |
| Compound eyes |
| Poison glands |
| c |
| Arthropoda-feature |
| Silver fish, scorpion, crab and honey bee all have compound eyes. These are present on each lateral side of the head and are convex. This eye consists of numerous visual units, the ommatidia. Each ommatidium consists of an outer cuticle covering a lens, beneath which are 6-8 retinal cells surrounding a light sensitive rhabdom. Adjacent ommatidia are separated by pigment cells. |
| Examples of Arthropoda |

|  |
| --- |
| The embryonated egg of Ascaris represents  1997 |
| an egg with blastula |
| an egg with a juvenile |
| an egg with an egg |
| an egg with gastrula. |
| b |
| Egg are embryonated |
| The embryonated egg of Ascaris represents an egg with a juvenile. In case of Ascaris, the eggs containing the second stage of juvenile are called embryonated egg. These are infective to human host. In suitable conditions of temperature and moisture these eggs can survive for 5 to 6 years in the soil |
| Characteristics of nematodes |

|  |
| --- |
| Which of the following statements is without exception for sponges? |
| They all have calcareous spicules. |
| They have high regenerative power. |
| They are found only in marine water. |
| They are all radially symmetrical. |
| b |
| Marine sponges-flourescence |
| Sponges may have calcareous or siliceous spicules. All sponges are not marine, some are freshwater living also. Sponges may be asymmetrical or bilaterally symmetrical, besides being radially symmetrical. So, these characters are with exception. The character without exception is the regenerative power of sponges. All sponges have a good power of regeneration. They can regrow any part of the body lost or cut off. Small fragments can grow into a complete sponge. |
| Examples of porifera |

|  |
| --- |
| Pneumatic bone is found in  1996 |
| Shark |
| Rana |
| Pigeon |
| whale. |
| c |
| Light weight to fly |
| Pneumatic bone is present in pigeon to keep it light weight because it has to fly. Pneumatic bone has a hollow cavity, which makes it light. |
| Characteristics of aves |

|  |
| --- |
| Which of the following is common among mammals?  1996 |
| They undergo no moulting. |
| They have seven cervical vertebrae. |
| They are carnivores. |
| They have ventral nerve cord. |
| a |
| Moulting-invertebrate feature |
| Mammals do not undergo moulting. Moulting is usually exhibited by invertebrates. In many vertebrate species, cervical vertebrae are variable in number, however almost all mammals have seven cervical vertebrae including those with short neck such as elephants or whales and those with very long necks, such as giraffes. But there are a few exceptional cases in which there are nine cervical vertebrae in mammals. All the mammals are not carnivorous, they may be herbivorous, carnivorous and omnivorous also. Mammals have dorsal nerve cord. |
| Characteristics of mammalia |

|  |
| --- |
| The organisms attached to the substratum, generally, possess  1995 |
| one single opening of the digestive canal |
| cilia on the surface to create water current |
| radial symmetry |
| asymmetrical body. |
| c |
| Jelly fish |
| The organisms attached to the substratum possess radial symmetry in all vertical planes. All the animals belonging to cnidaria (e.g., jellyfish) and echinodermata (e.g., starfish) are radially symmetrical and typically sessile in their adult form. In radial symmetry the parts in an organ or organism when cut through the centre in any direction produces two halves that are mirror images of each other. |
| Examples of echinodermata |

|  |
| --- |
| A common characteristic of all vertebrates without exception is  1994 |
| the division of body into head, neck, trunk and tail |
| their body covered with an exoskeleton |
| the possession of two pairs of functional appendages |
| the presence of well-developed skull. |
| d |
| Central neural system |
| The sub-phylum vertebrata or craniata have a well developed central nervous system that is differentiated into brain and spinal cord. Brain is protected by a brain box called cranium, so they are also called as craniata. |
| Characteristics of vertebrata |

|  |
| --- |
| One of the special characters of coelenterata only is the occurrence of  1994 |
| Polymorphism |
| flame cells |
| Hermaphroditism |
| nematocysts. |
| d |
| Sting cells were present |
| The cells characteristic of the coelenterates include stinging cells (cnidocytes or cnidoblasts or nematoblasts) for offence and defence. The stinging cells, when discharged, give out from a sac, the cnide or cnidocyst or nematocyst, a long thread-tube that may coil around the prey, or attach to it, or inject a toxin, called hypnotoxin, into it to paralyse it. |
| Characteristics of coelenterata |

|  |
| --- |
| Which of the following is an example of platyhelminthes?  1994 |
| Plasmodium |
| Schistosoma |
| Trypanosoma |
| Wuchereria |
| B |
| worms |
| Platyhelminthes have soft and dorsoventrally flattened body with bilateral symmetry. Plasmodium and Trypanosoma belong to Phylum Protozoa while Wuchereria belongs to Phylum Aschelminthes |
| Examples of platyhelminthes |

|  |
| --- |
| Among the following organisms point out a completely non-parasitic form  1994 |
| Tapeworm |
| Mosquito |
| Sea anemone |
| Leech. |
| c |
| Sting cells were present |
| Sea anemone is completely non-parasitic form. It shows the example of mutualism. Sea-anemone attaches itself to shell used by a hermit crab. The anemone obtains nourishment from the scraps of food left by the crab and is transported from place to place when the crab moves. The crab is protected by the stinging cells in the tentacles of sea anemone. |
| Examples of annelida |

|  |
| --- |
| Tube feet are the characteristic structures of  1994 |
| Starfish |
| Crayfish |
| Jellyfish |
| cuttlefish. |
| a |
| Star fish |
| Starfish belongs to the Phylum Echinodermata who have developed tube feet for locomotion. The tube feet generally protrude out through special radial areas called ambulacra. They are extended and retracted by variations in hydraulic pressure of fluid in them and by contractions of their muscles. |
| Characteristics of Echinodermata |

|  |
| --- |
| Which of the following does not have an open circulatory system?  1994 |
| Frog's tadpole |
| Prawn |
| Chelifer |
| Cockroach |
| a |
| Tadpole |
| In the open circulatory system, the blood is not confined to the blood vessels, but it flows in the open spaces. Prawn, Chelifer and cockroach have open circulatory system. Frog's tadpole has closed circulatory system, that is the blood flows in the blood vessels. |
| Examples of amphibia |

|  |
| --- |
| Which is common between ostrich, penguin and kiwi?  1993 |
| Running birds |
| Migratory birds |
| Flightless birds |
| Four toed birds |
| c |
| The birds don’t fly |
| Ostrich, penguin and kiwi are flightless birds |
| Examples of aves |

|  |
| --- |
| Which one assists in locomotion?  1993 |
| Trichocysts in Paramecium |
| Pedicellariae of starfish |
| Clitellum in Pheretima |
| Posterior sucker in Hirudinaria |
| d |
| Crawling using body |
| The looping or crawling movement in Hirudinaria is performed with the help of muscles and suckers which serve for attachment. |
| Characteristics of annelida |

|  |
| --- |
| What is true about Taenia saginata? |
| Life history has pig as intermediate host. |
| There are two large suckers on scolex. |
| Rostellar hooks are absent. |
| Rostellum has double circle of hooks. |
| c |
| Worm lacks hooks |
| The beef tapeworm Taenia saginata is similar to the pork tapeworm Taenia solium, in structure and life history. It is the commonest tapeworm of man with a much greater incidence than that of T. solium. Scolex bears four strong, rounded, adhesive suckers but lacks hooks and rostellum. |
| Examples of nematode |

|  |
| --- |
| Which one of the following animals possesses nerve cells but no nerves?  1993 |
| Hydra |
| Tapeworm |
| Earthworm |
| Frog's tadpole |
| a |
| Nerve plexus is present |
| Hydra possesses a very primitive type of nervous system. It includes bipolar and multipolar nerve cells or neurons lying immediately above the muscle processes and forming an irregular and discontinuous nerve net or nerve plexus. Neighbouring nerve cells are not fused together, but their processes or neurites form synaptic junctions. Such a nerve net is called a synaptic nerve net. Nerve cells are numerous around mouth and on pedal disc but show no groupings in the form of a nerve controlling centre like brain or nerve ring. |
| Characteristics of Hydra |

|  |
| --- |
| Budding is a normal mode of asexual reproduction in  1993 |
| starfish and Hydra |
| hydra and sponges |
| tapeworm and Hydra |
| sponge and starfish. |
| b |
| Growth on body |
| Budding is an asexual mode of reproduction in Hydra and sponges. Bud is formed as an outgrowth on the body surface, then detached to form new animal. |
| Examples of Hydra |

|  |
| --- |
| Tracheae of cockroach and mammal are similar in having  1993 |
| paired nature |
| noncollapsible walls |
| ciliated inner lining |
| origin from head. |
| b |
| Air passage tract is absent |
| Tracheae act as passage of air during respiration in both cockroach and mammals. In cockroach, the cuticular lining is spirally thickened forming taenidia which prevents the tracheal tubes from collapsing. In mammals, cartilaginous rings supporting the walls of the tracheae prevent their collapsing. |
| Examples of arthropoda |

|  |
| --- |
| A larval stage occurs in the life history of all members of the group  1993 |
| frog, lizard and cockroach |
| Ascaris, housefly and frog |
| housefly, earthworm and mosquito |
| butterfly, frog and mosquito. |
| d |
| Arthropoda -sub phylum examples |
| In butterfly, the larval stage is known as caterpillar, in frog is known as tadpole and in mosquito is known as wriggler. |
| Examples of Insecta |

|  |
| --- |
| Gorilla, chimpanzee, monkeys and humans belong to the same  1993 |
| Species |
| Genus |
| family |
| order. |
| d |
| Primates |
| Gorilla, chimpanzee, monkeys and humans belong to the same Order i.e., Primates. They have well developed brain, flat nails on fingers and toes. First digit is usually opposable, an adaptation for grasping. Eyes are typically large and turned forward. |
| Examples of mammalia |

|  |
| --- |
| What is common in whale, bat and rat? |
| Absence of neck |
| Muscular diaphragm between thorax and abdomen |
| Extra-abdominal testes to avoid high temperature of body |
| Presence of external ears |
| b |
| Diaphragm is present |
| Whale, bat and rat are mammals. Diaphragm is present in mammals. The diaphragm separates the thoracic cavity (with lung and heart) from the abdominal cavity (with digestive system and urogenital system). |
| Characteristics of mammalia |

|  |
| --- |
| Aristotle's lantern occurs in Class  1995 |
| Echinoidea |
| Asteroidea |
| Holothuroidea |
| Ophiuroidea. |
| a |
| Greek ship lantern |
| Aristotle's lantern occurs in the Class Echinoidea. Five teeth surrounding the mouth are attached to a masticatory apparatus, called Aristotle's lantern, after its discoverer and because of its resemblance to an ancient Greek ship-lantern. It is situated within the test and projects slightly through the mouth. It consists of five large calcareous plates, called pyramids or alveoli. By means of special protractor and retractor muscles the lantern can be partially protracted and retracted through the mouth. Aristotle's lantern is used in feeding. |
| Characteristics of mammalia |

|  |
| --- |
| Starfish belongs to  1992 |
| Asteriodea |
| Ophiuroidea |
| Holothuroidea |
| Crinoidea. |
| a |
| Central disc |
| Starfishes belong to Class Asteroidea, characterized by the presence of five or more arms not sharply set off from a central disc. They are free-living marine animals that occur on sandy or muddy bottoms or crawl about over rocks and shells. All are carnivorous. They in general, exhibit remarkable powers of autotomy and regeneration. |
| Examples of asteriodea |

|  |
| --- |
| Eye of the molluscan group that resembles vertebrate eye is  1992 |
| Bivalvia |
| Gastropoda |
| Pelecypoda |
| cephalopoda. |
| d |
| Ectodermal invagination |
| In cephalopoda paired eyes are large, efficient and bulge from the dorso-lateral sides of the head. They bear striking resemblance to those of a vertebrate in that a cornea, iris, lens and retina are present. Lens projects an inverted image on the retina, as in the vertebrate eye. External muscle attachments enable limited movements of the eye. But the embryological development of the cephalopod eye is entirely different from that of the vertebrate eye, so that homologically they are different, for the vertebrate eye is formed as an outgrowth of the brain, while the cephalopod eye is formed by an ectodermal invagination. |
| Characteristics of Mollusca |

|  |
| --- |
| Adult Culex and Anopheles can be distinguished with the help of 1995 |
| mouth parts/colour |
| sitting posture |
| antennae/wings |
| feeding habits. |
| b |
| For posture |
| Two common mosquito genera, Anopheles and Culex can be easily identified by their sitting postures. When sitting, the abdomen of Anopheles is always held at an angle to the surface while that of Culex is held parallel to the surface. |
| Characteristics of arthropoda |

|  |
| --- |
| Sound box of birds is called |
| Pygostyle |
| Larynx |
| Syrinx |
| Synsacrum. |
| c |
| Junction with brochi |
| At the posterior end or base of the trachea, at its junction with the bronchi, is found a special structure, the syrinx or voice box, concerned with sound production. It is characteristic of birds as it does not occur in other vertebrates. |
| Characteristics of aves |

|  |
| --- |
| Ascaris larva is called  1992 |
| Cysticercus |
| Rhabditiform |
| Hexacanth |
| Onchosphere. |
| b |
| First larval stage |
| In Ascaris, rhabditiform larva of first stage is not infective. In a week's time, it moults within the egg shell and becomes the second stage rhabditoid, which is capable of infecting the host. Cysticercus, hexacanth and onchosphere are the larval stages of Taenia |
| Examples of nematode |

|  |
| --- |
| The simplest type of canal system in porifera is  1992 |
| ascon type |
| leucon type |
| sycon type |
| radial type. |
| a |
| Leucosolenia |
| Sponges belong to the Phylum Porifera. Ostia, spongocoel and osculum together form a canal system which is characteristic of all sponges. Canal system of Leucosolenia is of ascon type. It is the simplest type of canal system found in sponges. Water enters directly through ostia into the central spongocoel, which is lined by choanocytes and leaves through osculum. Sycon type of canal system is found Sycon and Leucon type is found in Spongilla. There is no canal system named as radial type. |
| Characteristics of porifera |

|  |
| --- |
| An egg laying mammal is  1992 |
| Kangaroo |
| Platypus |
| Koala |
| whale. |
| b |
| Duck billed platypus |
| Duck-billed platypus is an egg laying mammal. It is found in the rivers in Eastern Australia and Tasmania. It is a beaver like monotreme about long and well adapted to live in water. Usually, two eggs are laid at a time. The female curls around them for incubation and remains inactive for about two weeks. Newly hatched young ones are very immature, naked, blind and each is long. |
| Examples of mammals |

|  |
| --- |
| Kidney of adult rabbit is  1992 |
| Pronephros |
| Metanephros |
| Mesonephros |
| Opisthonephros. |
| b |
| Nephrogenic mesoderm |
| Kidney of adult rabbit is metanephros. It is formed from the posterior end of the nephrogenic mesoderm which is displaced somewhat anteriorly and laterally. |
| Characteristics of mammalia |

|  |
| --- |
| Which one occurs in echinodermata?  1991 |
| Bilateral symmetry |
| Radial symmetry |
| Porous body |
| Soft skin |
| b |
| Two halves |
| Radial symmetry is the arrangement of parts in an organ or organism such that cutting through the centre of the structure in any direction produces two halves that are mirror images of each other. All animals belonging to the cnidaria (e.g., jellyfish) and echinodermata (e.g., starfish) are radially symmetrical. |
| Segmentation |

|  |
| --- |
| An insect regarded as greatest mechanical carrier of diseases is  1991 |
| Pediculus |
| Cimex |
| Musca |
| Xenopsylla. |
| c |
| House fly |
| Musca is the zoological name of house fly which is regarded as mechanical carrier of many diseases. It is very active and keeps on visiting on dirty things and eatables as well. |
| Characteristics of arthropoda |

|  |
| --- |
| Metamorphosis of insects is regulated through hormone  1991 |
| Pheromone |
| Thyroxine |
| Ecdysone |
| All of these. |
| c |
| Horomones |
| Ecdysone is a steroid hormone, secreted by a pair of prothoracic glands in the thorax of insects and by Y-organs in crustaceans, that stimulates moulting and metamorphosis. In insects its release is stimulated by prothoracicotropic hormone. |
| Characteristics of arthropoda |

|  |
| --- |
| Classification of Porifera is based on  1991 |
| Branching |
| Spicules |
| Reproduction |
| Symmetry. |
| b |
| Skeleton |
| The Phylum Porifera is divided into three classes : calcarea or calcispongiae, hexactinellida or hyalospongiae and demospongiae or sclerospongiae, on the basis of spicules (skeleton). Class Calcarea have calcareous spicules, Class Hexactinellida have siliceous spicules and Class Demospongiae have siliceous spicules or spongin fibres or both. |
| Basics of classification |

|  |
| --- |
| The excretory structures of flatworms/ Taenia are  1991 |
| flame cells |
| protonephridia |
| malpighian tubules |
| green glands |
| a |
| Funnel shaped lumen |
| Flame cells are scattered throughout parenchyma from which they remove metabolic wastes. A flame cell is of irregular shape, with granular cytoplasm and a nucleus. Bundle of cilia, or flame, arises from basal granules near nucleus. Cilia are enclosed into a funnel-shaped lumen formed by the terminal blind end of a capillary. Protonephridia are found in flatworms, Malpighian tubules in insects and green glands in crustaceans. |
| Characteristics of annelida |

|  |
| --- |
| Bladderworm/cysticercus is the larval stage of1991 |
| Tapeworm |
| Roundworm |
| Pinworm |
| Liver fluke. |
| a |
| Laval stage of worm |
| Cysticercus is the larval stage of tapeworm which is characterised by a large vesicle and one scolex. Cysticercus develops in adult tapeworm only when ingested by the human host. In pig's body it leads quite an inactive life and remains viable for several years, after which it dies and becomes calcified. Pork (pig's flesh) containing viable cysticerci is called measly pork for its spotted appearance. |
| Characteristics of annelida |

|  |
| --- |
| Penguin occurs in  1990 |
| Australia |
| Antarctica |
| Africa |
| America. |
| b |
| Cold regions |
| Penguins are a group of aquatic, flightless birds living almost exclusively in Antarctica. |
| Examples of mammalia |

|  |
| --- |
| Kala-azar and Oriental Sore are spread by |
| housefly |
| bed bug |
| sand fly |
| fruit fly. |
| c |
| Lesihmaniasis |
| Visceral leishmaniasis, also known as kala-azar and black fever, is the most severe form of leishmaniasis, a disease caused by parasites of the Leishmania genus. It is transmitted by sand fly. The adult female sand fly is a bloodsucker, usually feeding at night on sleeping prey. When the fly bites an animal infected with L. donovani, the pathogen is ingested along with the prey's blood.  Leishmania tropica produces skin ulcers known as oriental sore or Delhi sore. The disease is spread by sand flies. The parasite lives in the endothelial cells of skin capillaries. It leads to ulcerated wounds with raised edges. They do not cause much pain. |
| Examples of insecta |

|  |
| --- |
| Malpighian tubules are |
| excretory organs of insects |
| excretory organs of annelids |
| respiratory organs of insects |
| respiratory organs of annelids. |
| a |
| Excretory tubes |
| In insects’ Malpighian tubules are attached to the alimentary canal at the extreme anterior end of hindgut. These are fine, long, unbranched, yellowish and blind tubules lying freely in the haemolymph. These are between 60 to 150 in number and are arranged in 6-8 bundles. These excrete out nitrogenous wastes from the body in the form of uric acid. |
| Characteristics of insecta |

|  |
| --- |
| Taenia saginata differs from Taenia solium in |
| absence of scolex hooks |
| absence of scolex hooks and uterine branching |
| absence of scolex hooks and presence of both male and female reproductive organs |
| presence of scolex hooks. |
| a |
| Tapeworm |
| The beef tapeworm Taenia saginata is similar to the pork tapeworm Taenia solium, in structure and life history. It is the commonest tapeworm of man with a much greater incidence than that of T. solium. Its intermediate hosts are cattle and buffaloes. It is longer than T.solium, usually attaining a length upto 12 meters or more. Scolex bears four strong, rounded, adhesive suckers but lacks hooks. Strobila comprises up to 2,000 proglottides. A gravid proglottid contains about 100,000 eggs. Uterus of gravid proglottides has 15 to 35 branches on either side. |
| Examples of annelida |

|  |
| --- |
| Eutherians are characterised by  1989 |
| hairy skin |
| Ovoviviparity |
| true placentation |
| glandular skin. |
| b |
| Eutherian fetus |
| Eutheria is a taxon containing the placental mammals, such as humans. Nevertheless, all Eutherians are placental mammals. This means that a Eutherian fetus is nourished during gestation by a placenta. Eutherians are also viviparous, meaning that the offspring are carried in the mother's womb untill fully developed. |
| Characteristics of mammals |

|  |
| --- |
| Wish bone of birds is from |
| pelvic girdle |
| Skull |
| hind limbs |
| pectoral girdle/clavicles. |
| d |
| Furcula bone |
| The wishbone, known in anatomy as the furcula, is a sternum bone found in birds which is shaped like the letter Y. It is used as an attachment point for the wing muscles. It is so named because of a tradition: Two people pull on each side of such a bone, and when it breaks, the one who gets the larger part is said to have a wish granted. Two clavicles fused with inter clavicle to form a fork shaped bone called wish bone. |
| Characteristics of aves |

|  |
| --- |
| Flight muscles of bird are attached to  1989 |
| Clavicle |
| keel of sternum |
| Scapula |
| Coracoid. |
| b |
| Bony kneel |
| In birds, the pectoral and supracoracoideus muscles that power the wings are anchored to a large bony keel along the midline of the sternum. |
| Characteristics of aves |

|  |
| --- |
| A chordate character is  1989 |
| Gills |
| Spiracles |
| Post-anal tail |
| Chitinous exoskeleton. |
| c |
| Posterior and anterior |
| The diagnostic characters of chordates are notochord, dorsal hollow nerve cord, pharyngeal slits and post anal tail. Tail is the part of the body behind the cloacal or anal opening. It contains skeletal elements, muscles, blood vessels and nerves but no viscera. It provides much of propulsive force in aquatic species. The tail is reduced or absent in the adults of some chordates. |
| Characteristics of chordata |

|  |
| --- |
| Transfer of Taenia to secondary host occurs as  1989 |
| Oncosphere |
| Cysticercus |
| Morula |
| Egg. |
| a |
| Onchoblasts |
| Eggs of Taenia undergo cleavage to form morula. Morula, at its morphologically posterior end, develops three pairs of chitinous hooks secreted by differentiated cells, called onchoblasts. This six-hooked embryo, called hexacanth, possesses a pair of large penetration glands. It is surrounded by two hexacanth membranes. The hexacanth, together with all the membranes surrounding it, is known as onchosphere. The secondary or intermediate host acquires infection by ingesting the onchospheres. Pig, which regularly feeds on human excreta is the usual secondary host, but dog, monkey and sheep are also known to get the infection. Man himself may serve as the secondary host by ingesting onchospheres with inadequately cooked or raw vegetables. |
| Examples of insecta |

|  |
| --- |
| Jelly fish belongs to Class  1989 |
| Hydrozoa |
| Scyphozoa |
| Anthozoa |
| None of these. |
| b |
| Scyphozaoa |
| Jelly fish belongs to the Class Scyphozoa of the Phylum Cnidaria. Its genus is Aurelia. |
| Characteristics of echinodermata |

|  |
| --- |
| Fish which can be used in biological control of mosquitoes/larvicidal fish is |
|  |
|  |
| Cat fish |
| Gambusia. |
| d |
| Freshwater fish |
| Gambusia is a species of freshwater fish. It is remarkably hardy, surviving in waters of very low oxygen saturations, high salinities and high temperatures. For these reasons, this species may now be the most widespread freshwater fish in the world, having being introduced as a biocontrol in certain countries to control mosquitoes. It feeds on larval and pupal stages of mosquitoes. |
| Class Insecta |

|  |
| --- |
| Hair occur in all mammals except those of  1988 |
| Rodentia |
| Chiroptera |
| Primate |
| Cetacea. |
| d |
| Special mammals |
| Order Cetacea includes whales, dolphins and porpoises. These are the most highly modified mammals. They have a fish-like body with smooth, hairless skin devoid of sweat and oil glands, far posterior nares, small eyes, minute ear openings without pinnae, paddle-like forelimbs, no hindlimbs, abdominal testes and flattened tail ending in two horizontal flaps or flukes. |
| Characteristics of mammalia |

|  |
| --- |
| Bird vertebrae are |
| Acoelous |
| Heterocoelous |
| Amphicoelous |
| Procoelous. |
| b |
| Saddle shaped |
| Bird vertebrae are heterocoelous i.e., the centra of vertebrae have saddle - shaped ends. Acoelous refers to vertebrae that are flat on both ends (mammals). Amphicoelous means both ends of the centrum are concave (fish). Procoelous means concave in front and convex in back (anurans and reptiles). |
| Characteristics of aves |

|  |
| --- |
| Feet of kingfisher are modified for  1988 |
| Wading |
| Perching |
| Running |
| Catching. |
| a |
| locomotion |
| Hindlimbs are variously modified for various functions like perching, grasping, etc. In the kingfisher they are modified for wading. The legs and toes are exceptionally long and slender and serve to walk over aquatic vegetation or marshes. |
| Characteristics of mammals |

|  |
| --- |
| Both male and female pigeons secrete milk through  1988 |
| salivary glands |
| modified sweat glands |
| crop |
| gizzard. |
| c |
| Epithelial cells called as |
| Pigeons are noted for their unique ability to produce "pigeon's milk", a soft, cheesy and nourishing secretion, especially during the breeding season. It is formed by the degeneration of the epithelial cells lining the crop. It is regurgitated into the mouth of the young birds until they are old enough to manage a grain-diet like their parents. The pigeon's milk includes water, fat, protein (casein) and lactose. The milk is produced by both sexes and contains 35 per cent of fat. |
| Characteristics of Aves |

|  |
| --- |
| Typhlops is  1988 |
| sea snake |
| glass snake |
| blind snake |
| grass snake. |
| c |
| Non poisonous |
| Typhlops is a genus of blind snakes (non-poisonous snake) found in Europe, Africa, Asia and Central and South America. Sea snake is a poisonous snake while grass snake is a non-poisonous snake. Glass snake is a lizard. |
| Examples of repitilia |

|  |
| --- |
| Necturus is  1988 |
| hell bender |
| congo eel |
| mud puppy |
| blind worm. |
| c |
| Congo eel |
| Necturus is a mud puppy belonging to the Order Urodela of Class Amphibia. Hell bender is a large salamander. Amphiuma is a Congo Eel and Ichthyophis is a blind worm. |
| Characteristics of amphibia |

|  |
| --- |
| Fire bellied toad is |
| Amphiuma |
| Bombina |
| Necturus |
| Salamandra. |
| b |
| Small toads |
| The fire-bellied toads is a group of eight species of small toads belonging to the genus Bombina. They are found across much of Europe and Asia, staying in water or near the shore. Their name derives from the brightly coloured red or yellow and black patterns on their ventral region, which act as warning to its predators. Amphiuma is a Congo-eel. Necturus is a mud puppy and Salamandra is a salamander. |
| Examples of amphibia |

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| Which is not a true amphibian animal? |
| Salamander |
| Toad |
| Tortoise |
| Frog |
| c |
| Live in both land and water -possess gills |
| Tortoise belongs to the Class Reptilia. Its body is protected by a shell consisting of a dorsal carapace and ventral plastron. |
| Examples of amphibia |

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| A wood boring mollusc/shipworm is  1988 |
| Chiton |
| Teredo |
|  |
| Patella. |
| b |
| shipworm |
| The common name of Teredo is shipworm which belongs to the Class Bivalvia of the Phylum Moilusca. In it, head is absent and foot is wedge - shaped for burrowing. Shell consists of two valves. The common name of Chiton is the coat of mail shell (Class Amphineura), Limax is the grey slug (Class Gastropoda) and Patella is true limpet (Class Gastropoda). |
| Examples of mollusca |

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| Organ Pipe Coral is  1988 |
| Tubipora |
| Astraea |
| Helipora |
| Fungia. |
| a |
| Organ pipe coral |
| The common name of Tubipora is Organ Pipe Coral. It is a marine animal of the Class Anthozoa (Phylum Cnidaria). It occurs on reefs in shallow waters of the Indian and Pacific oceans and is characterized by long, parallel upright polyps or stalks, supported by a skeleton of rigid tubes of calcium carbonate. |
| Characteristics of echinodermata |