

Previous year questions (2016-2020)

Department of Zoology

Nambol L. Sanoi college, Nambol

Question Bank

2nd Semester (Elective)

ZOO-202: Functional Anatomy of Non-chordates

UNIT I: Protozoa, Metazoa and Porifera

Objective type questions (1 mark)

- (a) A chamber common to all types of canal system of sponges is called **(2016)**
- (i) radial chamber
 - (ii) paragastric cavity
 - (iii) excurrent canal
 - (iv) incurrent canal
- (b) The blue colouration of sponge is rare. This is due to the presence of **(2017)**
- (i) Zoochlorellae
 - (ii) Bacteria
 - (iii) Phytochlorellae
 - (iv) Virus
- (c) Pre-cystic stage histolytica is called of *Entamoeba histolytica* **(2018)**
- (i) feeding trophozoite
 - (ii) magna form
 - (iii) growing trophozoite
 - (iv) minuta form
- (d) The micronucleus in *Paramecium* is concerned with **(2018)**
- (i) osmoregulation
 - (ii) reproduction
 - (iii) nutrition
 - (iv) excretion
- (e) Infective stage of *Entamoeba* is **(2019)**

- (i) sporozoite
- (ii) quadrinucleate cyst
- (iii) trophozoite
- (iv) spore

(f) Intermediate host of sleeping sickness is (2019)

- (i) sand fly
- (ii) male Anopheles
- (iii) tsetse fly
- (iv) mayfly

Very short answer type (1 mark)

- (a) Name the most important organelle which is lacking in *Entamoeba histolytica*. (2016)
- (b) Name the fertilized egg of malarial parasite found on the outside of mosquito's stomach. (2017)

Short answer type (3 marks)

- (a) Draw a diagram of an ascon type of canal system labelling how water enters and leaves in such type of canal system. (2016)
- (b) Who regarded that chamber of sponge as a unit of individuality? Sponges need a continuous current of water flowing through their body. Why? (2016)
- (c) Draw a diagram of triradiate spicule. Name the cells which secrete the spicules (2017)
- (d) Who coined the term Porifera? What is meant by parazoology? What is the lifeline of sponges? (2017)
- (e) Name any three polymorphic forms of *Trypanosoma gambiense*. (2018)
- (f) Write the underlying ideas of Colonial theory, Syncytial theory and Polyphyletic theory about the origin of Metazoa. (2018)
- (g) Define polymorphism and metagenesis. Name the phylum in which both phenomena occur. (2018)
- (h) Differentiate conjugation and endomixis. Write three points only. (2019)
- (i) Draw and label any one syconoid type of canal system. (2019)

6 marks questions

- (a) *Euglena viridis* is a typical phytoflagellate 1 protozoan. Describe mixotrophic nutrition with one example. (2016)
- (b) Why cannot the *Paramecium caudatum* change shape like the *Amoeba proteus*? What are the main functions of two types of nucleus present in *P. caudatum*? (2016)
- (c) *Entamoeba histolytica* is a monogenetic. Give reason. Who discovered the pathogenic nature of *E. histolytica*? Name the causal organism of amoebiasis. (2017)
- (d) Who discovered the protozoan causative agent of malaria? Who confirmed the relationship between malaria and mosquito? Name the vector of malaria. (2017)

12 marks questions

- (a) Give an account of the life history of malarial parasite (*Plasmodium vivax*) in man. What do you mean by prophylaxis? (2018)
- (b) Write a note on the economic importance of sponges. (2018)
- (c) Describe the structure, nutrition and mode of reproduction in *Trypanosoma gambiense*. (2018)

UNIT II: Coelentrata, Ctenophora, Platyhelminthes and Nemathehelminthes

Objective type questions (1 mark)

- (a) In *Fasciola hepatica*, sporocyst produces rediac; rediae produce cercariae larvae. In this case, the phenomenon is called (2016)
- (i) paedogenesis
 - (ii) polyembryony
 - (iii) neoteny
 - (iv) parthenogenesis
- (b) Trematodes are parasitic and commonly called flukes. This is due to their (2017)
- (i) mode of nutrition
 - (ii) flat leaf-like form
 - (iii) mode of excretion
 - (iv) mode of distribution
- (c) Alimentary canal in tapeworm is (2018)
- (i) straight

- (ü) coiled
- (ii) branched
- (iv) absent

(d) *Ascaris* (2019)

- (i) shows sexual dimorphism
- (ii) shows no difference between sexes
- (iii) has no sex organ
- (iv) shows bigger male and shorter female

Very short answer type (1 mark)

- (a) What is the name of phylum for the study of flat worms? (2016)
- (b) Separation of gravid proglottid with strobili of *Taenia solium* is a process. What is the name of the term in the process? (2017)
- (c) Why are the eggs of *Ascaris* called mammillated? (2018)
- (d) Flesh is digested in the stomach of man but why *Taenia* is not digested? (2019)

Short answer type (3 marks)

- (a) Who. suggested the name Platyhelminthes to flat worms? Name the phenomenon when gravid segments of *Taenia solium* detach from strobila. What is measly pork? (2016)
- (b) What is mammillated egg? Write the generic name and order of the animal giving mammillated egg. *Ascaris*. (2016)
- (c) Write the three most important morphological characters of *Fasciola hepatica* with reference to their parasitic adaptation. (2016)
- (d) Write the three most important internal characters of *Taenia solium* 2 with reference to their parasitic adaptation. (2017)
- (e) Female *Ascaris lumbricoides* is a good example of didelphic. Why? Name one generic name of the phylum Nematelminthes which have rhabditiform larva and Laberrant migration respectively. (2017)
- (f) Write any three points of difference between Trematoda and Cestoda. (2018)
- (g) Write the harmful effects of larval as well as adult stages of *Ascaris*. (2019)
- (h) Proglottids of tapeworm are not true body segments like annelid. Justify the statement. (2019)

6 marks questions

- (a) Write the new name of Nematelminthes. Who proposed the Aschelminthes? What is name embryonated egg? (2016)
- (b) Which worm causes ascariasis? Write the scientific name of causal organism of this disease. Explain the terms monarchic and telogonic. (2016)
- (c) What is pineal seta? How many testis and ovary are present in male and female roundworms respectively? (2017)
- (d) What is the other name of phylum Coelenterata? Coelenterates differ from other animals in having a specialized cell in their epidermis or a gastrodermis. Name the specialized cells and uses. (2017)

12 marks questions

- (a) What is parasitic adaptation? Write the parasitic adaptations of *Fasciola hepatica* or *Taenia solium*. (2018)
- (b) Name the egg and larva of *Ascaris*. Describe the life history of *Ascaris*. (2019)

UNIT III: Annelida, Arthropoda, Mollusca and Echinodermata

Objective type questions (1 mark)

- (a) Ink gland is present in (2016)
- (i) Arthropoda
 - (ii) Mollusca
 - (iii) Crustacea
 - (iv) Rotifera
- (b) In bees, dance is meant for (2016)
- (i) attack
 - (ii) communication
 - (iii) reproduction
 - (iv) visiting source of food
- (c) Operculum is characteristic of present and (2017)
- (i) silverfish
 - (ii) apple snail
 - (iii) Lymnaea

- (iv) Planorbis
- (d) The members of a bee colony recognize each other by (2017)
- (i) dance
 - (ii) smell
 - (iii) vision
 - (iv) touch
- (e) The study of insects is called (2018)
- (i) Enthrology
 - (ii) Entomology
 - (iii) Epidemiology
 - (iv) Insect ecology
- (f) Point out which is not an insect from the following (2018)
- (i) Silverfish
 - (ii) Springtail
 - (iii) Prawn
 - (iv) Cricket
- (g) Complete metamorphosis is found in (2019)
- (i) silverfish
 - (ii) bedbug
 - (iii) grasshopper
 - (iv) gypsy moth

Very short answer type (1 mark)

- (a) Body of mollusca is covered by external hard shell. A gastropod mollusc is found in your locality without covering by this hard shell. Write the generic name of it. (2016)
- (b) Pupa is an important stage of metamorphosis. An insect belonging to nt 3 class Insecta and order Hemiptera does not have this stage in its life history. Name the insect. (2016)
- (c) Draw the diagram of pedicellariae. (2016)
- (d) Draw the diagram of an ampulla found in the ambulacral system of echinoderms. (2017)
- (e) Who Coined the name Echinodermata? (2017)
- (f) What is the function of Aristotle's lantern? (2017)
- (g) Define hemimetabolous insects. (2018)

- (h) A marine crustacean larva is having a minute body with three indistinct regions, a single median eye and three pairs of jointed appendages-the uniramous antennules, biramous antennae and mandibles. Name the larva. **(2018)**
- (i) Why are ants and honeybees called social insects? **(2019)**
- (j) Coelom in annelid is a true coelom. Give the meaning of true coelom. **(2019)**
- (k) Write the name of a mollusc that belongs to class Monoplacophora which has the affinity between Mollusca and Annelida. **(2019)**

Short answer type (3 marks)

- (a) Cocoon is produced by silk moths belonging to phylum Arthropoda. Name another phylum which can produce cocoon with two good examples in scientific names. **(2016)**
- (b) Are white ants' social insects? What are formicaries and termitarium? **(2016)**
- (c) Give the example of an insect without metamorphosis and without & pupal stage in their lifetime. Write one generic name of a wingless insect. **(2017)**
- (d) Mosquitoes are harmful insects. Male mosquitoes cannot pierce our skin but female mosquitoes can. Why? Name the puncturing elements in of female mosquitoes. **(2017)**
- (e) Draw and label either piercing and sucking or siphoning mouthparts of insects. **(2018)**
- (f) Animals belonging to one class of Annelida have fixed number of body segments and both anterior and posterior suckers present. Name the class, also mention the number of body segments and their mode of living. **(2018)**
- (g) Write the names of the corresponding larval forms of Asterozoa, Ophiurozoa and Holothurozoa. **(2018)**
- (h) A fisherman a shelled animal and when opened it, he found some beautiful pearls. Suggest one probable name of the animal and write its class and phylum. **(2019)**
- (i) Write three characteristic features of annelidan trochophore larva. **(2019)**
- (j) What do you mean by ametabolic development in insects? Give example of a ametabolous insect. **(2019)**

6 marks questions

- (a) Ambulacral system is a unique system of Echinoderms. What is the main function of this system? How many canals are present in this system? Name them. **(2016)**
- (b) What is the most remarkable characteristic of monoplacophoran mollusc? Write the scientific name of a monoplacophoran mollusc and its affinity to another phylum. **(2017)**
- (c) Draw and label the diagram of Brachiolaria larva. **(2017)**

12 marks questions

- (a) What is torsion with reference to gastropods? What is its effect on the body structures in gastropoda? Write the significance of torsion. (2018)
- (b) Describe the ambulacral system of Asterias with a labelled diagram. (2019)
- (c) Classify phylum Annelida up to classes giving class characters and examples. (2018)

UNIT IV: Minor Phyla

Objective type questions (1 mark)

- (a) The name Phoronida is coined by (2016)
- (i) Dujardin
 - (ii) Hatschek
 - (iii) Rudolphi
 - (iv) Sedgwick
- (b) Moss animals belong to (2016)
- (i) Mollusca
 - (ii) Ectoprocta
 - (iii) Spongillidae
 - (iv) Chitonidae
- (c) An animal which is found in marine, worm-like body enclosed in a chitinous tube may belongs to (2017)
- (i) Branchiopoda
 - (ii) Phoronida
 - (iii) Bryozoa
 - (iv) Pogonophora
- (d) Lamp-shells are animals belong to (2017)
- (i) Bryozoa
 - (ii) Brachiopoda
 - (iii) Ectoprocta
 - (iv) Gastropoda

(e) Minor phylum Brachiopoda commonly called as is (2017)

- (i) lamp shells
- (ii) spoon worms
- (iii) sea-mats
- (iv) moss animals

(f) An example of phylum Brachiopoda is (2019)

- (i) Lingula
- (ii) Sipunculus
- (iii) Ctenophora
- (iv) Echiurus

Very short answer type (1 mark)

- (a) Mention the phylum of the worm which bears proboscis. (2016)
- (b) Name the term used in the animals whose anterior end bears a crescentic tentacular crown bearing two rows of ciliated tentacles. (2017)
- (c) Write the name of the new phylum, the animals belonging to is commonly called as peanut worms. (2017)
- (d) Name the different types of zooids found in Bryozoan colony. (2018)
- (e) Give one example of phylum Echiuroidea. (2018)
- (f) Define minor phyla. (2018)
- (g) Why are animalcules? (2019)
- (h) Who gave the name of phylum Nemertinea? (2019)
- (i) Give one example of phylum Phoronida. (2019)

Short answer type (3 marks)

- (a) Write the shape of alimentary canals found in the minor phyla Phoronida, Brachiopoda and Bryozoa. (2016)
- (b) Name any two lophophore-bearing minor phyla with examples. (2016)
- (c) What is lophophore? Name two phyla which bear lophophore. (2017)
- (d) What is the meaning of Acanthocephala? Write the peculiar digestive character of this phylum and name one example of this phylum. (2017)

- (e) Who coined the phylum Acanthocephala? Why are the animals of this phylum called spiny headed worms? Give one example. **(2018)**
- (f) Give justification of rotifers to put into the status of an independent phylum. Write a few lines about the structure of pharynx of rotifers. **(2018)**
- (g) What is lophophore? Name any two minor phyla which bear lophophore. **(2019)**
- (h) Write any three distinguishing characters of phylum Acanthocephala. **(2019)**

