

E-Content

entitled

“Question bank for Zoology”

Sample questions for Ist Semester Zoology (Honours)

Paper-I (Theory)

Unit-IV (Taxonomy and Classification)

1. What do you mean by taxonomy?
2. What is systematics?
3. What is classification?
4. What do you mean by taxon? Give an example.
5. What is phenon?
6. Define category.
7. What is nomenclature?
8. What do you mean by binomial nomenclature? Give an example.
9. Who is the profounder of binomial system of nomenclature?
10. What do you mean by trinomial nomenclature? Give an example.
11. What is meant by International code of Zoological nomenclature?
12. Write some important rules of Zoological nomenclature.
13. What is hierarchy?
14. Describe the Linnaean hierarchy with suitable illustrations.
15. Discuss the limitations of the Linnaean hierarchy.
16. Enlist some important rules for assigning scientific names.
17. What is law of priority?
18. Define species.
19. Discuss various aspects of biological species concept.
20. Write the drawbacks in the application of biological species concept.
21. Discuss the main theme of typological species concept.
22. Discuss the main theme of nominalistic species concept.
23. Discuss the underlying aspects of evolutionary species concept.
24. Write down the salient features of phylum Porifera.
25. Classify phylum Porifera up to subclass with distinctive characters and suitable examples.
26. Write down the salient features of phylum Cnidaria.
27. Classify phylum Cnidaria. up to subclass with distinctive characters and suitable examples.
28. Write down the salient features of phylum Annelida.
29. Classify phylum Annelida . up to subclass with distinctive characters and suitable examples.

30. Write down the diagnostic features of class Amphibia.
31. Classify Amphibia up to living orders with distinctive characters and suitable examples.
32. How can amphibians be distinguished from the reptiles on the basis of skin characteristics?
33. Write down the diagnostic features of class Reptilia.
34. Classify reptiles up to orders with distinctive characters and suitable examples.

Dr. Saumen Chakrabarti

Sample questions for Ist Semester Zoology (General)

Paper-I (Theory)

Unit-I (Non-chordates-I(without coelom))

1. Why *Paramecium* is called 'slipper animalcule'?
2. What is metachronal rhythm of locomotion?
3. What are holotricus cilia?
4. Describe the ultrastructure of cilia in *Paramecium* with labelled diagram.
5. What is infraciliature?
6. What do you mean by cart wheel arrangement?
7. Write the differences between cilia and flagella.
8. Which organelle serves as osmoregulatory function in *Paramecium*?
9. Write the mechanism of ciliary locomotion in *Paramecium*.
10. What is conjugation?
11. Describe the process of conjugation in *Paramecium* with labelled diagram.
12. Mention the role of important factors in conjugation.
13. Write down the significance of conjugation.
14. Describe the canal system of *Sycon* with labelled diagram.
15. Write down the route of water circulation in the canal system of *Sycon*.
16. Mention the physiological functions of canal system of *Sycon*.
17. Name the cell types present in the body wall of *Sycon* and state their functions.
18. What is spicules? Name the spicule where it found?
19. Describe different types of spicules in *Sycon*?
20. Write down the significance of spicules in *Sycon*.
21. Why Obelia colony is regarded as trimorphic colony?
22. Briefly describe the structure of Obelia colony.
23. What do you mean by metagenesis?
24. What is alternation of generation?
25. Describe the life cycle of Obelia with diagram.
26. Discuss the phenomenon of metagenesis in the life cycle of Obelia.
27. Write down the different hosts of *Fasciola hepatica*.
28. Write the different types of larva found in the life cycle of *Fasciola hepatica*.
29. Describe the external morphology of *Fasciola hepatica*.
30. What is fascioliasis?
31. What is flame cell? Write its function?
32. Write the position of opening of Laurer's canal and its function.
33. Mention the number of sucker and its position in *Fasciola*.

Sample questions for 2nd Semester Zoology (Honours)

Paper-2A (Theory)

Unit-II (Applied Zoology)

1. What is IMC? Give some examples.
2. What are exotic carps? Give some examples.
3. What do you mean by composite fish culture
4. Discuss the methodology of composite fish culture.
5. Mention the advantages and disadvantages of composite fish culture.
6. Mention the fungal, bacterial and protozoan diseases of cultivable fishes, causative agent and their control measures.
7. Write the scientific name of a freshwater and brackish water prawn.
8. Distinguish between penaeid and non- penaeid prawn.
9. Describe the rearing methods of prawn in freshwater.
10. Mention the problems encountered in freshwater prawn culture.
11. Describe the culture methodology of prawn in brackish water in India.
12. Discuss the hazards of brackish water prawn farming.
13. Write three important indigenous breeds of poultry and their characteristics features.
14. Briefly discuss the three important exotic breeds of poultry with suitable examples.
15. What is deep litter system? Mention its advantages and disadvantages.
16. Briefly describe the methodology of deep litter system.
17. Mention the precautions taken for setting of litter in poultry house.
18. What is apiculture?
19. What are different species of honey bees used in bee keeping in India?
20. Describe the Langstroth method of bee keeping in India with neat diagram.
21. Why is honeybees called social insect?
22. What is silk?
23. Write the scientific name of four different species of silkworms.
24. How silk is processed from cocoon?
25. Describe the life cycle of Bombyx mori.
26. What is chandraki?
27. What is the difference between fibroin and sericin?
28. What do you mean by univoltine, bivoltine and multivoltine?
29. Write one protozoan and one bacterial disease of silkworms, their symptoms and preventive measures.

Sample questions for 2nd Semester Zoology (General)

Paper-2A (Theory) Unit-II (Biochemistry)

1. What do you mean by aldose and ketose sugar? Cite examples each.
2. Name a non-reducing disaccharide.
3. What do you mean by glycosidic bond? How is it formed?
4. What are carbohydrates?
5. Describe different types of monosaccharides with suitable examples.
6. Discuss different types of oligosaccharides with suitable examples.
7. Classify simple protein with suitable examples.
8. Classify conjugated protein with suitable examples.
9. What do you mean by derived protein?
10. What do you mean by saturated and unsaturated fatty acids? Give two examples of each.
11. Classify simple lipids with suitable examples
12. Classify compound lipids with suitable examples
13. Define enzyme. Mention important properties of enzyme.
14. What do you mean by competitive and non-competitive inhibition of enzyme action?
15. Explain the enzyme action with the help of 'lock and key model'.
16. Explain the enzyme action with the help of 'Induced fit model.'
17. Describe in brief the effect of temperature on enzyme action.
18. Describe in brief the effect of pH on enzyme action.
19. What is isoenzyme? Give example.
20. What is coenzyme? Give example.
21. What do you mean by allosteric enzymes? Give example,

Sample questions for 3rd Semester Zoology (Honours)

Paper-3A (Theory)

Unit-II (Ecology)

1. Define ecosystem.
2. Explain the role of different biotic components in an ecosystem.
3. What is energy flow?
4. Explain two laws of thermodynamics with reference to energy flow.
5. Discuss the energy flow in ecosystem with reference to Lindemann concept of community dynamics.
6. Define population.
7. Mention the important properties of population.
8. Explain briefly the S-shaped growth curve and J-shaped growth curve of population with examples.
9. What do you mean by ecological natality and ecological mortality?
10. What are density-dependent and density-independent factors?
11. What do you mean by survivorship curves?
12. Define biotic community.
13. What is the difference between autotrophic and heterotrophic community?
14. Explain four important characteristic feature of biotic community.
15. What do you mean by stratification?
16. Briefly discuss vertical and horizontal stratification with reference to biotic community.
17. What is trophic level?
18. What is ecological niche?
19. Explain different types of ecological niche with suitable examples.
20. What do you mean by 'competitive exclusion principle'? Prove competitive exclusion principle with the help of Gause experiment.
21. What is ecotone?
22. What is edge effect?
23. What do you mean by ecological succession?
24. What is the difference between primary and secondary succession?
25. Discuss different types of ecological succession and its causes.
26. What do you mean by pioneer community and climax community?

Sample questions for 3rd Semester Zoology (General)

Paper-3A (Theory)

Unit-I (Taxonomy and classification)

1. What do you mean by taxonomy?
2. What is systematics?
3. What is classification?
4. What do you mean by taxon? Give an example.
5. What is phenon?
6. Define category.
7. What is nomenclature?
8. What do you mean by binomial nomenclature? Give an example.
9. Who is the profounder of binomial system of nomenclature?
10. What do you mean by trinomial nomenclature? Give an example.
11. Describe the taxonomic hierarchy with suitable illustrations.
12. Enlist some important rules for assigning scientific names.
13. What is law of priority?
14. Define species.
15. Discuss various aspects of biological species concept.
16. Write the drawbacks in the application of biological species concept.
17. Write down the salient features of phylum Porifera.
18. Classify phylum Porifera up to subclass with distinctive characters and suitable examples.
19. Write down the salient features of phylum Cnidaria.
20. Classify phylum Cnidaria up to subclass with distinctive characters and suitable examples.
21. Write down the salient features of phylum Annelida.
22. Classify phylum Annelida up to subclass with distinctive characters and suitable examples.
23. Write down the diagnostic features of class Amphibia.
24. Classify Amphibia up to living orders with distinctive characters and suitable examples.
25. How can amphibians be distinguished from the reptiles on the basis of skin characteristics?
26. Write down the diagnostic features of class Reptilia.
27. Classify reptiles up to orders with distinctive characters and suitable examples.

Sample questions for 4th Semester Zoology (Honours)
Paper-4A (Theory)
Unit-I (Parasitology)

1. Describe Human cycle(or Asexual cycle) of *Plasmodium vivax* with labelled diagram.
2. What is meant by haemozoin granules?
3. What is signet ring stage?
4. What is Schuffner's dot?
5. Describe Mosquito cycle (or Sexual cycle) of *Plasmodium vivax* with labelled diagram.
6. Why plasmodium is called a digenetic parasite?
7. Briefly discuss the pathogenecity and clinical features of *Plasmodium vivax*.
8. Describe the life cycle of *Wuchereria bancrofti* with labelled diagram.
9. What do you mean by nocturnal periodicity?
10. What is elephantiasis?
11. What is lymphangitis?
12. Briefly discuss the pathogenecity and clinical features of *Wuchereria bancrofti*.
13. Describe the life cycle of *Ancylostoma duodenale* with labelled diagram.
14. Briefly discuss the pathogenecity and clinical features of *Ancylostoma duodenale*.

Sample questions for 4th Semester Zoology (General)

Paper-4A (Theory)

Unit-I (Applied Zoology II)

1. What is silk?
2. Write the scientific name of four different species of silkworms.
3. Write down the different host plants of silkworms.
4. Describe the life cycle of *Bombyx mori*.
5. What do you mean by univoltine, bivoltine and multivoltine?
6. What is the difference between fibroin and sericin?
7. What is sericulture?
8. Describe the rearing method of *Bombyx mori*.
9. What is chandraki?
10. How silk is processed from cocoon?
11. Write one protozoan and one bacterial disease of silkworms, their symptoms and preventive measures.
12. What is apiculture?
13. What are different species of honey bees used in bee keeping in India?
14. Describe the life cycle of *Apis indica*.
15. Describe the Langstroth method of bee keeping in India with neat diagram.
16. Why is honeybees called social insect?

Sample questions for 5th Semester Zoology (Honours)

Paper-5A (Theory)

Unit-I

(Adaptation, Zoogeography & Ethology)

1. What is convergent adaptation?
2. What is divergent adaptation?
3. Give a brief account of adaptive radiation of forelimbs in placental mammals with diagram.
4. Give a brief account of adaptive radiation of teeth in placental mammals with diagram.
5. Briefly discuss the morphological, anatomical and physiological adaptations in Pigeon.
6. Briefly discuss the morphological, anatomical and physiological adaptations in Camel.
7. Briefly discuss the morphological, anatomical and physiological adaptations in Whale.
8. Write the difference between cryptic and warning colouration.
9. What do you mean by mimicry?
10. Explain Batesian and Mullerian mimicry with examples.
11. Write the significance of mimicry.
12. What is zoogeography?
13. What is zoogeographical realm?
14. Write the geographical boundaries, sub-regions and climate of oriental realm.
13. Write the faunal characteristics of Oriental realm.
14. Write the geographical boundaries, sub-regions and climate of Australian realm.
15. Write the faunal characteristics of Australian realm.
16. What is Wallace's line?
17. Write the geographical boundaries, sub-regions and climate of Ethiopian realm.
18. Write the faunal characteristics of Ethiopian realm.

Sample questions for 5th Semester Zoology (General)

Paper-5A(Theory)

Unit-I

(Parasitology)

1. Describe Human cycle (or Asexual cycle) of *Plasmodium vivax* with labelled diagram.
2. What is meant by haemozoin granules?
3. What is signet ring stage?
4. What is Schuffner's dot?
5. Describe Mosquito cycle (or Sexual cycle) of *Plasmodium vivax* with labelled diagram.
6. Why plasmodium is called a digenetic parasite?
7. Briefly discuss the pathogenecity and clinical features of *Plasmodium vivax*.
8. Describe the habit and habitat of *Entamoeba histolytica*.
9. Describe the structural features of trophozoite stage of *Entamoeba histolytica*.
10. With labelled diagram, describe the life cycle of *Entamoeba histolytica*.
11. What is amoebiasis?
12. Why *Entamoeba histolytica* is regarded as a monogenic parasite?
13. What do you mean by encystations and excystation?
14. Mention the structural features of pre-cystic and cystic forms of *Entamoeba histolytica*?
15. Why *Entamoeba histolytica* is regarded as a monodial parasite?
16. Write the differences between male and female *Ascaris lumbricoides*.
17. Describe the life cycle of *Ascaris lumbricoides*.with labelled diagram.
18. What is ascariasis?
19. What is Loeffler.s syndrome?
20. Write the morphological and physiological adaptations of *Ascaris lumbricoides*.
21. Write the morphological and physiological adaptations of *Taenia solium*.

Sample questions for 6th Semester Zoology (Honours)

Paper-6A

Unit-I

(Evolutionary Biology)

1. Describe Urey-Miller Experiment with suitable diagram.
2. Write short note on Protenoids.
3. Write short note on Coacervates.
4. Discuss Neo-Darwinism with suitable illustration.
5. What is Hardy-Weinberg law?
6. Mention the equilibrium conditions of Hardy-Weinberg law.
7. Under what conditions does Hardy-Weinberg law operate?
8. Explain Hardy-Weinberg law with mathematical illustration.
9. Explain Stabilizing selection with suitable example.
10. Explain Directional selection with suitable example.
11. Explain Disruptive selection with suitable example.
12. How does natural selection forms the basis of evolution?
13. Write the different types of reproductive isolation and mention its importance.
14. Briefly discuss different types post zygotic isolating mechanisms with suitable example.
15. What is speciation?
16. Explain allopatric speciation with examples.
17. Explain sympatric speciation with examples.
18. Explain parapatric speciation with examples.

Dr. Saumen Chakrabarti

Associate Professor

Department of Zoology

Women's College, Agartala, Tripura, India