



Rayat Shikshan Sanstha's
D. P. Bhosale College, Koregaon

B.Sc. Part III Semester V

Paper XII: Aquatic Biology and Endocrinology

Question Bank

Multiple Choice Questions

- Increase in the amount of nutrients i.e. lot of Algae in a water body is called?
a) Oligotrophic b) Eutrophication c) Mesotrophic d) Endotrophic
- A coral reef provides----- for small fish.
a) food b) shelter c) friends d) nothing
- How many types of aquatic ecosystems are there?
a) One b) Two c) Three d) Four
- Where can we find both running as well as stagnant water?
a) Marine ecosystem b) Wetland
c) Coral reefs d) Freshwater ecosystem
- Which is the simplest aquatic ecosystem?
a) Pond b) Stream c) Lake d) Marine
- The second trophic level in a lake is?
a) Fungi b) Benthos c) Zooplanktons d) Phytoplanktons
- What are the examples of Lotic water?
a) Streams, rivers and springs b) River, lake and pond
c) Swamps and lakes d) Lakes and ponds
- What is lentic habitat?
a) Running water habitat b) Standing water habitat
c) Marine habitat d) none
- Which is the largest salt water lake in India?
a) Wular lake b) Chilika Lake c) Lonar lake d) Pushkar lake
- The Lonar lake is situated in which state?

- a) West Bengal b) Maharashtra c) Karnataka d) Madhya Pradesh
13. Which of the following Is the largest freshwater lake in India?
 a) Wular lake b) Chilika Lake c) Lonar lake d) Pushkar lake
14. The ----- zone lies between Euphotic and Benthic zone
 a) Littoral b) Climate c) Euphotic d) Benthic
15. Which of the following promotes eutrophication of lakes?
 a) Magnesium b) Sodium c) Calcium d) Phosphorous
16. Which one of the following lakes has minimum productivity?
 a) Mesotrophic lake b) senescent lake
 c) Oligotrophic lake d) Eutrophic lake
17. The depth of Euphotic zone is measured by
 a) Calorimeter b) Turbidity meter c) Secchi disk d) Radar
18. The bottom area where production is less than respiration in a pond ecosystem is termed as_____.
 a) Profundal zone b) Tidal zone c) Benthic zone d) Limnetic zone
19. Which of the following lake zones has Phytoplanktons in abundance?
 a) Littoral zone b) Benthic zone c) Limnetic zone d) Profundal zone
20. A wetland that contains a mixture of fresh water and salt water is called
 a) An estuary b) A stream c) A river d) A pond
21. What is the ocean floor called?
 a) Plankton Zone b) Littoral Zone c) Benthic Zone d) All the above
22. Name the longest river in India
 a) Brahmaputra b) Ganga c) Godavari d) Krishna
23. An estuary is best defined as a place where-----
 a) fresh and salt water meet b) a river meets the Chesapeake Bay
 c) a group of animals are gathered d) the water from the land flows into a river
24. Which is Not an intertidal zone?
 a) High tide b) Neritic c) Low tide d) Mid tide
25. Organisms include clams, crabs, barnacles, and mussels.
 a) Intertidal zone b) Benthic zone c) Open-ocean zone d) Pelagic zone
26. ----- habitat characterized by standing water
 a) Lentic b) Lotic c) Benthic d) Arboreal

27. The study of lakes, ponds, rivers, and streams is called?
a) Marine Biology b) Botany c) Limnology d) Limnologis
28. What is the name of the animal phylum that forms coral reef
a) Coelenterate b) Protozoa c) Sponges d) Annelida
29. Which is the largest coral reef in the world?
a) Kingman reef b) The Great Barrier Reef
c) Lansdowne Bank d) Lyra reef
30. Which one among the following is the coral group of Island in India?
a) Nicobar b) Lakshadweep c) Minicoy d) Andaman
31. Coral polyps secrete what mineral?
a) Sodium chloride b) Calcium carbonate
c) Calcium hydroxide d) Calcium sulphate
32. Where is the Great Barrier Reef located?
a) Puerto Rico b) Florida c) Indonesia d) Australia
33. What is coral bleaching?
a) When coral get sick and loss its colour b) When coral dies
c) The zooxanthellae turns white d) When coral turns white during spawning
34. Eutrophication in lakes is due to the presence of-----
a) Do and Bacteria b) Nitrogen and Phosphorus
c) BOD and COD d) Chromium and mercury
35. How many types of aquatic ecosystems are there?
a) One b) Two c) Three d) Four
36. Where can we find both running water as well as stagnant water?
a) Marine Ecosystems b) Wetlands
c) Coral reefs d) Freshwater Ecosystems
37. Which ecosystem is known as giant permanent pond?
a) Lake ecosystem b) Pond ecosystem
c) Seashore ecosystem d) Marine ecosystem
38. The term ecosystem was proposed by _____
a) Lindeman b) AG Tansley c) Grinnel d) Turesson
39. What percentage of oxygen and carbon dioxide exists in the ecosystem?
a) 20.95% and 0.004% b) 20.95% and 0.04%
c) 20.0% and 0.40% d) 20.0% and 0.44%

40. Which is/are the abiotic components of an ecosystem?
a) Soil b) Protein c) Carbon d) All of the above
41. Which of the following represents the physical characteristics of water?
a) Chloride content b) BOD c) Turbidity d) COD
42. Which of the following is measured in mg/L?
a) Unit weight b) Coefficient of cohesion c) Discharge d) Turbidity
43. Freshwater lakes are most often limited by-----
a) Nitrogen b) Phosphorus c) Carbon d) None of the above
44. Nitrogen is absorbed by the plants in the form of
a) Ammonium b) Nitrites c) Nitrates d) All of these
45. Conversion of ammonia to nitrite and then to nitrates is called_____.
a) Ammonification b) Denitrification c) Assimilation d) Nitrification
46. The phosphorus cycle is unusual in that it is entirely-----
a) Within aquatic ecosystem b) Within terrestrial ecosystem
c) Sedimentary d) Gaseous
47. The main nitrogen reservoir in the biosphere is-----
a) Atmosphere b) Ocean c) Organism d) Rock
48. The largest reservoir of phosphorus in the biosphere is-----
a) Atmosphere b) Ocean c) Organism d) Rock
49. Nitrification is the part of which of the following cycle?
a) Oxygen Cycle b) Nitrogen Cycle c) Phosphorus Cycle d) None of above
50. Which of the following organisms fix nitrogen?
a) Plants b) Fish c) Fungi d) Bacteria
51. Which one of the following is a major constituents of biological membranes, nucleic acids and cellular energy transfer system?
a) Potassium b) Phosphorus c) Celenium d) Cobalt
52. What is the movement of nutrient elements through the various components of an ecosystem known?
a) Elemental cycling b) Gaseous cycling
c) Nutrient cycling d) Sedimentary cycling
53. What does a nutrient cycle involve?
a) Loss of nutrients b) Sedimentation of nutrients
c) Exhaustion of nutrients d) Storage and transfer of nutrients

54. The uppermost zone in lakes is called as _____
 a) Euphotic zone b) Benthic zone c) Littoral zone d) Climate zone
55. What is lentic habitat?
 a) Running water habitat b) Standing or still water habitat
 c) Marine water habitat d) None
56. What is lentic habitat?
 a) Running water habitat b) Standing or still water habitat
 c) Marine water habitat d) Stagnant water habitat
57. Eutrophic lakes are characterized by____
 a) low nutrients, low productivity b) high nutrients, high productivity
 c) high nutrients, low productivity d) low nutrients, high productivity
66. Ramsar conservation refers to the conservation of-----
 a) Deserts b) Wetlands c) Forests d) Agricultural land
67. The major reservoir of carbon is_____
 a) The atmosphere b) Ocean bed c) Plants and animals d) Rock
74. The depth of Euphotic zone is measured by_____
 a) Calorimeter b) Turbidity meter c) Secchi disk d) Radar
75. When glucose level falls below the normal value then the condition is called.....
 a) Hypoglycemia b) Ketosis c) Glycogenesis d) Hyperglycemia
76. Imbalance ofHormones, secreted by Islets of Langerhans leads to Diabetes mellitus.
 a) Insulin and Glucagon b) Calcitonin
 c) Parathormone d) Epinephrine and nor-epinephrine
- 77..... Gland functions as exocrine gland and also endocrine glands (Dual mode of function).
 a) Thyroid b) Parathyroid c) Pancrease d) Thymus
- 78 is the peptide hormone.
 a) Estrogen b) Testosteron c) Progesteron d) Insulin
- 79..... hormone is secreted by thyroid gland.
 a) Gastrin b) Estrogen c) Epinephrin d) Thyrocalcitonin
80. The normal blood sugar level is
 a) 190 mg per 100 ml of blood b) 250 mg per 100 ml of blood
 c) 120 mg per 100 ml of blood d) 20 mg per 100 ml of blood

81. In condition, blood sugar level is decreased.
a) Hyperglycemia b) Hypoglycemia c) Hypoinsulinism d) Tetany
82. is secreted by alpha cells of Islets of Langerhans.
a) Insulin b) Thyroxine c) glucagon d) Thyrocalcitonin
83. Parafollicular cells of Thyroid gland secretes hormone.
a) Thyrocalcitonin b) Oxytonin c) Testosterone d) Insulin
84. Thyrotrophin-releasing-factor (TRF) secreted by
a) Ovary b) Hypothalamus c) Pancrease d) Adrenal gland
85. Hypothyroidism leads to in Young ones.
a) Cretinism b) Grave's disease c) Diabetes mellitus d) Basedow's disease
86. cells of parathyroids secretes parathyroid hormone (PTH).
a) Alpha b) Beta c) Delta d) Chief
87. Hypoparathyroidism leads to disease.
a) Diabetes mellitus b) Tetany c) Cretinism d) Exophthalmic goitre
88. hormone is secreted by beta cells of Islets of Langerhans.
a) Glucagon b) Tri-ido-thyronin c) Insulin d) Thyroxin
89. is a hypoglycaemic antidiabetic factor (HAF).
a) Glucagon b) Tetra-ido-thyronin c) Insulin d) Thyroxin
90. is tyrosine derivative hormone.
a) Progesterone b) Adrenalin c) Insulin d) Tetra-ido-thyronine
91. secretes gastrin hormone.
a) A1 cells b) Alpha cells c) Beta cells d) Chief cells
92. is also called as hyper-glycaemic glycogenolytic factor (HGH).
a) Insulin b) Glucagon c) Gastrin d) Somatostatin
93. The process of formation of glucose from other than carbohydrate source is called as.....
a) Gluconeogenesis b) Glycogenesis c) Glycolysis d) Glycogenolysis
94. is a condition when the blood sugar level exceeds above the renal threshold that is 180 mg per 100 ml of blood.
a) Cretinism b) Glycosuria c) Tetany d) Goiter
95. disease occurs due to excessive secretion of Thyroxine hormone.
a) Tetany b) Grave's disease c) Myxedema d) Cretinism
96. Thyrocalcitonin is the of the thyroid.

- a) Iron lowering hormone b) Phosphate lowering hormone
 c) Calcium lowering hormone d) Sodium lowering hormone
97. Hypothyroidism leads to disease in Adults.
 a) Tetany b) Grave's disease c) Myxedema d) Cretinism
98. De Luca (1968), states that Vit-D is not metabolised to its functional form in absence of hormone.
 a) Thyroid b) Adrenal c) Islets of Langerhans d) Parathyroid
99. is a condition, in which blood sugar increases above the normal level that is above 120 mg per 100 ml of blood.
 a) Hyperglycaemia b) Hypoglycaemia c) Hyperinsulinism d) Tetany

Long Questions

1. Characters of marine water habitat.
2. Describe primary and secondary aquatic adaptation of animals.
3. Describe in brief the characteristic and faunal adaptation of a deep sea habitat.
4. Describe in detail the characters and faunal adaptation of benthic habitat.
5. Classify the freshwater environment and describe lentic ecosystem with suitable example.
6. What is lotic habitat? Describe its physic-chemical characteristics and fauna
7. What are the physic-chemical characteristics of marine environment? Describe in detail flora and fauna of the pelagic region.
8. Describe physic-chemical characteristics and biota of estuaries.
9. Describe the "Coral reef as a specialised oceanic ecosystem".
10. Explain the various types of reef?
11. Describe the Biotic-communities of pelagic zone.
12. Define intertidal zone? Describe the zonation of intertidal zones.
13. Describe in brief the pelagic zone? Explain the depth and layers of pelagic zones?
14. Explain in brief types of coral reefs? With suitable example?
15. What is an Ecosystem? Describe characteristics of and classification of lakes
16. Describe as an important limiting factors in lake ecosystem
17. Describe thermal stratification, flora and fauna of lake ecosystem
18. What is mean by stream? Describe different stages of stream development

19. Describe the nitrogen cycle in an ecosystem
20. Describe different physicochemical characteristics of lake
21. Describe modifications and adaptations in hill stream fishes
22. What is lake as an ecosystem? Describe abiotic and biotic components in lake ecosystem
23. Describe the characteristics and Fauna of a lotic habitat
24. Describe the characteristics and Fauna of a lentic habitat
25. write an account on effects of the physicochemical factors of the lake
26. What is an ecosystem? Describe lentic ecosystem with example
27. What is an ecosystem? Describe lotic ecosystem with example
28. Describe any two nutrients cycle in lake ecosystem
29. What is freshwater habitat? Describe the characteristics of freshwater habitat
30. Give an account of adaptations for freshwater habitat
31. Characters of marine water habitat.
32. Describe primary and secondary aquatic adaptation of animals.
33. Describe in brief the characteristic and faunal adaptation of a deep sea habitat.
34. Describe in detail the characters and faunal adaptation of benthic habitat.
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42. Define intertidal zone? Describe the zonation of intertidal zones.
43. Describe in brief the pelagic zone? Explain the depth and layers of pelagic zones?
44. Explain in brief types of coral reefs? With suitable example?
45. Explain in detail thyroid gland and add a note on Active principles of thyroid gland.
46. Give an account of Histological structure of thyroid gland and add a note on Hypothyroidism.

47. Give an account of Histological structure of thyroid gland and add a note on Hyperthyroidism.
48. Describe in detail, the Parathyroid gland and a note on its function.
49. Explain in detail thyroid gland and add a note on Role of thyroid gland.
50. Describe in detail, Histological structure of Adrenal cortex and add a note on functions of Adrenal cortex.
51. Give an account of Histological structure of Parathyroid gland and add a note on regulation of Hormonal secretion.
52. Describe in detail Histological structure of Adrenal Medulla and add a note on its secretion and functions
53. Describe in detail Histological structure of Islets of Langerhans and add a note on Insulin.
54. Give an account of Endocrine Pancreas and add a note on role of Endocrine Pancreas.
55. Explain in detail the Histological structure of endocrine Pancreas and add a note on Hyperglycaemia.
56. Give an account of Endocrine Pancreas and add a note on regulation of blood sugar level.

Write Short Notes on Following

1. Write short notes on fauna of littoral zone.
2. Zonation of lotic zone
3. Sublittoral zone
4. Deep sea fauna
5. Intertidal sandy shore
6. Explain Atoll reef
7. Pelagic zones
8. Lagoon type
9. Explain the characteristics of animals in Littoral zone
10. Explain the benthic zone
11. Fauna of littoral zone
12. Lentic habitat
13. Lotic habitat

14. Types of lakes
15. Nitrogen cycle
16. Sulphur cycle
17. Phosphorus cycle
18. Characteristics of lentic ecosystem
19. Zonation in lentic ecosystem
20. Characteristics of lotic ecosystem
21. Zonation in lotic ecosystem
22. Types of streams
23. Write a note on modification in hill stream fishes
24. Flora and fauna of lake ecosystem
25. Physicochemical characteristics of lakes
26. Physicochemical environment of streams
27. Lake morphometry
28. Stages of stream development
29. Write short notes on fauna of littoral zone.
30. Zonation of lotic zone
31. Sublittoral zone
32. Deep sea fauna
33. Intertidal sandy shore
34. Explain Atoll reef
35. Pelagic zones
36. Lagoon type
37. Explain the characteristics of animals in Littoral zone
38. Explain the benthic zone
39. Fauna of littoral zone
40. Lentic habitat
41. Lotic habitat
42. Histology of Thyroid gland
43. Role of Thyroid gland
44. Thyroid hormones
45. Thyrocalcitonin

46. Hyperthyroidism
47. Hypothyroidism
48. Histology of Parathyroid gland
49. Parathyroid gland
50. Adrenal cortex
51. Role of Adrenal cortex
52. Histology of Adrenal cortex
53. Hormones of Adrenal Medulla
54. Hormones of Adrenal Medulla
55. Histology of Pancreas
56. Insulin
57. Diabetes Mellitus
58. Endocrine Pancreas
59. Grave's disease