

1st Year Biology Important Short Questions

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UNIT 1

1. Differentiate b/w population & community.
2. How does theory differ from the law?
3. What is integrated disease management?
4. Differentiate b/w chemotherapy, radiotherapy & gene therapy.
5. What is hydroponic technique? Give its importance.
6. Write a note on vaccination.
7. Define biome with an example.
8. Define phyletic lineage & biodiversity.
9. Differentiate b/w deductive reasoning & inductive reasoning.

UNIT 2

1. Define biochemistry.
2. Give its importance.
3. Differentiate b/w glycosidic & peptide bond.
4. Define lipids.
5. Give two roles of waxes Differentiated b/w saturated & unsaturated fatty acid.

Give the structure of lecithin.

UNIT 3

1. What is the active site of an enzyme?
2. Differentiate b/w apoenzyme & holoenzyme.
3. What are cofactor & activator of enzyme?

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4. How does an enzyme accelerate a metabolic reaction?
5. Write four characteristics of enzymes.
6. What is induced fit model? Who proposed this model?
7. How does high temperature affect enzyme activities?
8. What is the role of pH in enzyme action?
9. Give optimum pH values for any two enzyme actions?
10. What are enzyme inhibitors? Give two examples.
11. Differentiate b/w reversible & irreversible enzyme inhibitors.
12. Differentiate b/w competitive & non-competitive enzyme inhibitors?

UNIT 4

1. Write down salient features of cell theory.
2. Differentiate bw phagocytosis & pinocytosis.
3. Give chemical composition of primary & secondary cell wall.
4. Give three functions of smooth endoplasmic reticulum.
5. Define storage diseases with two examples.
6. What is location of centrioles in the cell & what is their role?
7. Differentiate b/w chromoplasts & leucoplasts.
8. Differentiate b/w cisternae & cristae.
9. What are peroxisome, polysome & ribosome?

UNIT 5

1. Define species & virology with examples.
2. Give biological classification of corn.
3. What is binomial nomenclature?
4. What are two rules of nomenclature?
5. What are prions?
6. Differentiate b/w lytic phage & lysogenic phage.

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7. Write down symptoms & prevention of hepatitis?

UNIT 6

1. Write four postulates of germ theory.
2. What are mesosomes?
3. Describe their function.
4. Write misuse of antibiotics.
5. What are trichomes?
6. Give the structure & function of Heterocysts?
7. What are cyanobacteria?
8. Give its importance.

UNIT 7

1. What are choanoflagellates?
2. What are ciliates?
3. Give their importance.
4. Write two characteristics of ciliates.
5. Differentiate b/w micronucleus & macronucleus.
6. Differentiate b/w foraminiferans & actinopods.
7. What are apicomplexans?
8. Give one example.
9. How algae differ from plants?
10. What are red tides?
11. Give structure & function of diatoms.
12. Also write three characteristics of diatoms.
13. What are kelps?
14. Name the parts of thallus of a kelp.
15. Green algae are considered ancestral organism of green land plants, why?

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16. What is chlorella?
17. Give its significance.
18. What is importance of algae?

UNIT 8

1. What are lichens?
2. Give their ecological importance.
3. Differentiate b/w karyogamy & plasmogamy.
4. Differentiate b/w rusts & smuts.
5. What is budding & para sexuality?
6. What are toad stools? Give example.
7. What is histoplasmosis? Give its causes.
8. Give scientific name of yeast used in genetic research.
9. Define hyphae. Give their two types.
10. What is mycorrhiza?
11. Give its importance What are dikaryotic hyphae? Give example

UNIT 9

1. Why bryophytes plants are called amphibious plants?
2. How spores of mosses differ from spores of liver worts?
3. What is alternation of generation?
4. Give its significance.
5. Why sphenopsida are called arthophytes?
6. Differentiate b/w microphylls & megaphylls.
7. Define double fertilization in angiosperms.
8. Give its importance.
9. Differentiate b/w monocot stem & dicot stem.

UNIT 10

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1. Write the importance of sponges.
2. Define polymorphism with example.
3. Write down the importance of corals.
4. Differentiate b/w infestation & disinfestations.
5. Write names and uses of any two useful insects.
6. Define nymph & metamorphosis.
7. Give three characteristics of chordates.
8. Give the role of swim bladder in bony fishes.
9. Give two commercial importance of sharks.
10. Define regeneration & meristematic.
11. Write names and harms of any two harmful molluscs.
12. Differentiate b/w polyps & medusae.
13. Differentiate b/w coelomates & acoelomates.
14. Differentiate b/w diploblastia & triploblastic animals.

UNIT 11

1. Define bioenergetics
2. Differentiate b/w photosynthesis & respiration.
3. Define photosynthesis with equation.
4. What is compensation point? Where it occurs?
5. Write down the molecular formula for chlorophyll "a" and "b".
6. What are necessary pigments in plants? Give their importance.
7. Differentiate b/w absorption & action spectrum.
8. Differentiate b/w photosystem and photosystem
9. What is Z-scheme? Why is it called so?
10. What is fermentation? Explain its types.

UNIT 12

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1. Distinguish b/w nutrients & nutrition.
2. Write components & functions of saliva.
3. Name various types of the salivary gland in man.
4. Differentiate b/w peristalsis & anti-peristalsis.
5. How hunger pangs are caused?
6. What is heart burn or pyrosis?
7. Name types of cells present in gastric glands.
8. What prevents the wall of stomach from being digested?
9. How secretion is produced in man?
10. What is its effects on pancreas in man?
11. What is the role of liver in the digestion of food?

UNIT 13

1. Differentiate b/w organismic and cellular respiration?
2. How is air better respiratory medium than water?
3. What is photorespiration?
4. Name organelles involved in it.
5. Write the names of its products.
6. What is rubisco.
7. Write its importance.
8. Define respiratory surface.
9. Give three properties.
10. Differentiate b/w cutaneous & pulmonary respiration in frog.
11. What are counter current exchange and parabronchi?
12. Differentiate b/w diaphragm and pleura.
13. Name some respiratory disorder and explain one.
14. What is emphysema? Write its symptoms.
15. What is diving reflex?
16. What changes occur in animal during diving reflex.

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UNIT 14

1. Differentiate b/w water potential & solute potential.
2. Differentiate b/w plasmolysis & deplasmolysis.
3. Differentiate b/w apoplast & symplast pathway.
4. Differentiate b/w single & double circuit heart.
5. What are blue babies?
6. What is brain hemorrhage?
7. Give its two preventive measures.

1st year Biology important Long Question

1. (a). How study of biology helped mankind to improve the production of food.
(b). Define cloning. Discuss its types & importance.
2. (a). Discuss the role of the study of biology in the protection and conservation of the environment.
(b). Explain different types of polysachrides.
3. (a). Describe the importance of water in life.
(b). Describe acylglycerols in detail.
4. (a). Describe primary & secondary structure of protein.
(b). Compare DNA and RNA. Explain different types of RNA.
(c). Explain Watson and Crick model of DNA.
5. (a). Write a note on Endoplasmic reticulum.
(b). What are plastids? Explain the structure & function of chloroplast
6. (a). Describe the structure and function of mitochondria.

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- (b). Differentiate b/w prokaryotic & eukaryotic cells.
- 7. (a). Describe life cycle of a bacteriophage.
(b). How HIV is transmitted? Give a sketch of the infection cycle of HIV?
- 8. (a). Define hepatitis. Describe its symptoms, causes & types
(b). Describe different classes of bacteria on the basis of flagella.
- 9. (a). Discuss the process of nutrition in bacteria.
(b). Describe different physical & chemical methods to control bacteria.
- 10. (a). Write down the characteristics of cyanobacteria.
(b). Explain the taxonomic status of fungi.
- 11. (a). Discuss different methods of asexual reproduction in fungi.
(b). Write four economic gains & losses due to fungi.
- 12. (a). Give adaptations of fungi on land.
(b). Describe land adaptations of bryophytes.
- 13. (a). What is alternation of generation? Give its significance.
(b). How the evolution of leaf took place?
- 14. (a). Enlist steps involved in the evolution of seed.
(b). Describe in detail cyclic & non-cyclic phosphorylation.
- 15. (a). Draw and describe Calvin cycle in photosynthesis.

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- (b). What is glycolysis? Sketch its various steps.
16. (a). Draw the sketch and explain Krebs cycle.
(b). Give digestion in the cockroach.
(c). Explain the process of digestion in hydra.
17. (a). Describe digestion in oral cavity of man.
(b). Describe absorption of digested food in small intestine.
18. (a). Write a note on (i) Anorexia nervosa (ii) Bulimia nervosa (iii) Obesity
(b). Why transpiration is necessary evil?
19. (a). Explain various functions of human blood.
(b). Describe lymphatic system. explain its functions and components.
(c). Define immunity. Give its types.