

Quiz Bank

Qn.1. Microorganisms $(2 \times 10^{-11}) \times 4 \times 10^6 \times 2 \times 10^{-3} =$

A. 1.6×10^{-8}

B. 16×10^{-8}

C. 1.6×10^{-7}

D. 16×10^{-7}

Answer is B

Qn.2. Bacteria

A. Are prokaryotes

B. Are cell aggregates

C. Are viral particles

D. Are eukaryotic organisms

Answer is A

Qn.3. A microbe is

A. A unicellular organism

B. A multicellular microorganism

C. A unicellular macroorganism

D. A unicellular or multicellular microorganism

Answer is D

Qn.4. The mycelium of fungi is

A. A cell aggregate

B. A cellular filament

C. Filaments of cells

D. A part of hyphae

Answer is D

Qn.5. Molds are

A. Bacteria

B. Algae

C. Fungi

D. Protozoa

Answer is C

Qn.6. Protozoa are

- A. Prokaryotes
- B. Microplants
- C. Microanimals
- D. Microfungi

Answer is C

Qn.7. Surface-to-volume ratio (S/V) for a spherical cell with diameter D can be determined by following equation: $S/V = (\pi D^2)/(\pi D^3/6)$.

Assume that the rate of biodegradation is proportional to the S/V ratio of cells. Therefore, the ratio of biodegradation rates for two types of cells with diameters 1 and 50 μm , respectively, is

- A. 50
- B. 5
- C. 0.2
- D. 0.02

Answer is A

Qn.8. All proteins are composed of

- A. 10 amino acids
- B. 20 amino acids
- C. 4 nucleotides
- D. 15 monosaccharides

Answer is B

Qn. 9. Which of the following is an enzyme?

- A. Cellulose
- B. Cellobiose
- C. Cellulitis
- D. Cellulase

Answer is D

Qn.10. Bacteria are able to use such energy sources as

- A. Chemical energy of organic compounds
- B. Chemical energy of inorganic compounds
- C. Energy of light
- D. All of the above

Answer is D

Qn.11. In aerobic respiration, the final electron acceptor is

- A. Hydrogen
- B. Oxygen
- C. Water
- D. ATP

Answer is B

Qn.12. Mutation is

- A. Inheritable change in the base sequence of DNA
- B. Inheritable change in the base sequence of mRNA
- C. Non-inheritable change in the sequence of nucleotides
- D. Spontaneous change in the nucleotide sequence

Answer is A

Qn.13. Organelle is

- A. An inclusion in cytoplasm
- B. A cell component with specific function
- C. An inclusion in cytoplasm separated with membrane
- D. Visible in microscope cell component

Answer is B

Qn.14. Bacteria differ from Archaea by

- A. Cell shapes
- B. Cell sizes
- C. Cell wall components
- D. Cell structures

Answer is C

Qn.15. Unicellular fungi are

- A. Molds
- B. Yeasts
- C. Mushrooms
- D. Fruit bodies

Answer is B

Qn.16. Protozoa are differentiated by

- A. Means of digestion
- B. Means of locomotion
- C. Activity of photosynthesis
- D. Activity of biodegradation

Answer is B

Qn.17. Which of the following reactions is ammonification?

- A. $N_2 + [2H] + xATP \rightarrow RNH_2$
- B. $R(COO)NH_2 + [2H] \rightarrow RCOOH + NH_3$
- C. $NH_4^+ + 2O_2 \rightarrow NO_3^- + 2H^+ + H_2O$
- D. $2NO_3^- + 5[2H] \rightarrow N_2\uparrow + 2OH^- + 4H_2O$

Answer is B

Qn.18. The equation for the “anammox” process is

- A. $NH_4^+ + 2O_2 \rightarrow NO_3^- + 2H^+ + H_2O$
- B. $NH_4^+ + NO_2^- \rightarrow N_2 + 2H_2O$
- C. $NH_4^+ + NO_2^- + H_2O \rightarrow NO_3^- + 1/2N_2 + 3H_2O$
- D. $NH_4^+ + 0.5O_2 \rightarrow NO_2^- + 2H^+ + H_2O$

Answer is B

Qn.19. An important mechanism of membrane biofouling is

- A. Biodegradation of membrane material
- B. Biochemical modification of membrane surface
- C. Growth of bacteria in water
- D. Formation of microbial polysaccharides during microbial growth

Answer is B

Qn.20. Methanogens are

- A. Obligate anaerobic bacteria
- B. Able to reduce CO₂
- C. Bioagents of metal reduction and precipitation
- D. Bioagents of metal oxidation and dissolution

Answer is A