

1. Question :

Antoni van Leeuwenhoek was the first person in history to

Student Answer:



use a magnifying glass.



develop a taxonomic system.



view protozoa and bacteria.



disprove spontaneous generation.



prove the germ theory.

Points Received:

0 of 1

Comments:

Question 2 Question :

.

Microbes that can live in the presence or absence of oxygen are called

Student Answer:



anaerobes.



facultative anaerobes.



obligate parasites.



archaea.



prokaryotes.

Points Received:

1 of 1

Comments:

Question 3 Question :

.

Which of the following scientists provided evidence in favor of the concept of spontaneous generation?

Student Answer:

- ☐ Pasteur
- ☒ Needham
- ☒ Redi
- ☐ Buchner
- ☐ Spallanzani

Points Received:

0 of 1

Comments:

Question 4 Question :

The microbial production of alcohol from sugar is known as

Student Answer:

- ☒ fermentation.
- ☐ pasteurization.
- ☐ metabolism.
- ☐ abiogenesis.
- ☐ antiseptis.

Points Received:

1 of 1

Comments:

Question 5 Question :

Which of the following statements concerning Koch's postulates is false?

Student Answer:

- ☒ Koch's postulates cannot be used to demonstrate the cause of all diseases.

- ☐ A suspected pathogen must be able to be grown in the laboratory.
- ☐ All of Koch's postulates must be satisfied before an organism can be proven to cause a particular disease.
- ☐ Koch's postulates involve the experimental infection of susceptible hosts.
- ☒ A suspected pathogen must be found in the majority of individuals with a particular disease.

Points Received: **0 of 1**
Comments:

Question 6 Question :

The study of the body's defenses against pathogens is called

Student Answer:

- ☐ etiology.
- ☒ immunology.
- ☐ chemotherapy.
- ☐ molecular biology.
- ☐ epidemiology.

Points Received: **1 of 1**
Comments:

Question 7 Question :

Which of the following is NOT a characteristic of viruses?

Student Answer:

- ☒ they are visible with a light microscope.
- ☐ they are acellular.

- ☐ they are composed of genetic material and protein.
- ☐ they are smaller than prokaryotic cells.
- ☐ they are obligatory parasites.

Points Received: **1 of 1**
Comments:

Question 8 Question :

Saccharomyces cerevisiae is an example of which of the following types of microbes?

Student Answer:



- ☒ fungus
- ☐ protozoan
- ☐ prokaryote
- ☐ alga
- ☐ virus

Points Received: **1 of 1**
Comments:

Question 9 Question :

Proteins that promote chemical reactions in the cell are called

Student Answer:

- ☐ spores.
- ☒ enzymes.
- ☐ genes.
- ☐ protozoa.

☐ flagella.

Points Received: **1 of 1**

Comments:

Question 10 Question :

.

Which of the following scientists was the first to develop a taxonomic system for classifying organisms?

Student Answer:



Linnaeus



Needham



Leeuwenhoek



Lister



Pasteur

Points Received: **1 of 1**

Comments:

Question 11 Question :

.

Robert Koch was involved in research on all of the following topics EXCEPT

Student Answer:



the cause of anthrax.



the cause of fermentation.



development of a method to prove the cause of an infectious disease.



the cause of tuberculosis.



techniques for isolating microbes in the laboratory.

Points Received: **0 of 1**

Comments:

Question 12 Question :

.

Microorganisms characterized by the absence of a nucleus are called

Student Answer:

- ☐ fungi.
- ☐ pathogens.
- ☐ eukaryotes.
- ☒ prokaryotes.
- ☐ viruses.

Points Received: **1 of 1**

Comments:

Question 13 Question :

.

The term _____ literally means "produces disease."

Student Answer:

- ☐ prokaryote
- ☒ pathogen
- ☐ nosocomial
- ☐ facultative anaerobe
- ☐ animalcule

Points Received: **1 of 1**


Comments:

Question 14 Question :

.

The study of the causation of disease is known as

Student Answer:

- ☐ epidemiology.
- ☐ immunology.
- ☐ biotechnology.
-  ☒ etiology.
- ☐ chemotherapy.

Points Received:

1 of 1


Comments:

Question 15 Question :

.

The study of the occurrence, distribution, and spread of disease is known as

Student Answer:

- ☐ biotechnology.
-  ☒ epidemiology.
- ☐ molecular biology.
- ☐ serology.
- ☐ biochemistry.

Points Received:

1 of 1

Comments:

Question 16 Question :

.

Short, hairlike structures used only by eukaryotic cells for movement are called

Student Answer:

- ☐ pili.
- ☐ flagella.
- ☐ fimbriae.
- ☐ pseudopodia.
- ☒ cilia.

Points Received:

1 of 1

Comments:

Question 17 Question :

Which of the following is NOT a component of bacterial cell walls?

Student Answer:

- ☐ peptidoglycan
- ☒ lipoteichoic acids
- ☐ mycolic acid
- ☐ tetrapeptide
- ☒ tubulin

Points Received:

0 of 1

Comments:

Question 18 Question :

Endospores survive a variety of harsh conditions in part because of the presence of

Student Answer:

- ☐ mycolic acid.
- ☐ lipopolysaccharide.

- ☒ hopanoids.
- ☒ dipicolinic acid.
- ☐ glycoproteins.

Points Received: **0 of 1**
Comments:

Question 19 Question :

When cells are placed in a hypertonic solution, they lose water and shrivel. This process is called

- Student Answer:
- ☒ crenation.
- ☒ endocytosis.
- ☐ passive transport.
- ☐ periplasm.
- ☐ plasmalemma.

Points Received: **0 of 1**
Comments:

Question 20 Question :

All of the following are common to both the Gram stain and the acid-fast stain EXCEPT

- Student Answer:
- ☒ primary stain.
- ☐ counterstain.
- ☐ a decolorizing agent.

- ✓ ☐ a mordant.
- ☐ a decolorizing agent and a counterstain.

Points Received: **0 of 1**

Comments:

Question 21 Question :

A patient suffering from tuberculosis could be diagnosed by use of the _____ stain.

Student Answer:

- ✗ ☒ Gram
- ☐ endospore
- ✓ ☐ acid-fast
- ☐ flagellar
- ☐ capsule

Points Received: **0 of 1**

Comments:

Question 22 Question :

Carbolfuchsin is the _____ in the acid-fast stain.

Student Answer:

- ✓ ☐ primary stain
- ☐ mordant
- ✗ ☒ decolorizer
- ☐ counterstain
- ☐ fixing reagent

Points Received: **0 of 1**

Comments:

Question 23 Question :

.

The kingdoms included in the Linnaeus system are

Student Answer:

- ☐ Animalia and Prokaryotae.
- ☐ Protista and Plantae.
- ☐ Fungi and Protista.
- ☒ Animalia and Plantae.
- ☐ Prokaryotae and Protista.

Points Received: **1 of 1**

Comments:

Question 24 Question :

.

The rules of naming organisms are called

Student Answer:

- ☐ taxonomy.
- ☒ nomenclature.
- ☐ classification.
- ☐ binomials.
- ☐ identification.

Points Received: **1 of 1**

Comments:

Question 25 Question :

In the Gram stain procedure, iodine serves as a

Student Answer:

- ☐ counterstain.
- ☐ decolorizing agent.
- ☒ mordant.
- ☐ primary stain.
- ☐ fixative.

Points Received:

1 of 1

Comments:

Question 26 Question :

Crystal violet is the _____ in the Gram stain.

Student Answer:

- ☒ counterstain
- ☐ decolorizing agent
- ☐ mordant
- ☐ neutralizing agent
- ☒ primary stain

Points Received:

0 of 1

Comments:

Question 27 Question :

The _____ makes use of malachite green.

Student Answer:

- ☐ negative stain
- ☐ flagellar stain
- ☒ endospore stain
- ☐ electron microscopy stain
- ☐ acid-fast stain

Points Received:

1 of 1

Comments:

Question 28 Question :

The molecule that an enzyme acts upon is known as its

Student Answer:

- ☒ substrate.
- ☐ coenzyme.
- ☐ apoenzyme.
- ☐ holoenzyme.
- ☒ catalyst.

Points Received:

0 of 1

Comments:

Question 29 Question :

Pyruvic acid is a product of

Student Answer:

- ☒ the Krebs cycle.
- ☐ fermentation.

- ☐ glycolysis.
- ☐ the Entner-Doudoroff pathway.
- ☒ both glycolysis and the Entner-Doudoroff pathway.

Points Received: **0 of 1**

Comments:

Question 30 Question :

In microbiology, the term *growth* usually refers to an increase in

Student Answer:

- ☐ a microbe's size.
- ☒ the number of microbial cells.
- ☐ the amount of ATP produced.
- ☐ the number and size of microbial cells.
- ☒ the number and size of microbial cells and the amount of ATP produced.

Points Received: **0 of 1**

Comments:

Question 31 Question :

Human pathogens are classified as

Student Answer:

- ☐ thermoduric.
- ☒ thermophiles.
- ☒ mesophiles.
- ☐ hyperthermophiles.

☐ psychrophiles.

Points Received: **0 of 1**

Comments:

Question 32 Question :

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Organisms that can grow with or without oxygen present are

Student Answer:

- ☐ obligate aerobes.
- ☒ facultative anaerobes.
- ☐ aerotolerant anaerobes.
- ☐ obligate anaerobes.
- ☒ either facultative anaerobes or aerotolerant anaerobes.

Points Received: **0 of 1**

Comments:

Question 33 Question :

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Another term for the logarithmic growth of bacterial cells is

Student Answer:

- ☐ generation time.
- ☒ exponential growth.
- ☐ arithmetic growth.
- ☐ absorbance.
- ☐ binary fission.

Points Received: **1 of 1**

Comments:

Question 34 Question :

During the _____ of growth, cells are dying faster than new cells are being produced.

Student Answer:

☐

death phase

☐

lag phase

☐

log phase

☒

stationary phase

☐

longitudinal phase

Points Received:

0 of 1

Comments:

Question 35 Question :

Metabolic activity is at maximum level in the _____ of growth.

Student Answer:

☐

lag phase

☒

log phase

☐

death phase

☐

stationary phase

☐

intermediate phase

Points Received:

1 of 1

Comments:

Question 36 Question :

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Cells are rapidly growing and dividing during the _____ of growth.

Student Answer:

- ☐ death phase
- ☐ lag phase
- ☒ log phase
- ☐ stationary phase
- ☐ indeterminate phase

Points Received:

1 of 1

Comments:

Question 37 Question :

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Microaerophiles are microbes that grow best at low

Student Answer:

- ☐ carbon dioxide levels.
- ☐ pH values.
- ☐ hydrostatic pressure.
- ☒ oxygen levels.
- ☐ salt concentrations.

Points Received:

1 of 1

Comments:

Question 38 Question :

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An acidophile thrives under conditions of low

Student Answer:

- ☐ carbon dioxide levels.
- ☐ salt concentrations.
- ☐ oxygen levels.
- ☐ hydrostatic pressure.
- ☒ pH.

Points Received:

1 of 1

Comments:

Question 39 Question :

The bacterial chromosome is

Student Answer:

- ☐ usually circular.
- ☐ found in a nucleoid.
- ☐ found in a nucleus.
- ☒ both circular and found in a nucleoid.
- ☐ both circular and found in a nucleus.

Points Received:

0 of 1

Comments:

Question 40 Question :

Which of the following is an example of sanitization?

Student Answer:

- ☒ A public toilet is treated with disinfectants.
- ☐ A surgeon washes her hands before surgery.

- ☐ Heat is used to kill potential pathogens in apple juice.
- ☐ An autoclave is used to prepare nutrient agar.
- ☐ A nurse prepares an injection site with an alcohol swab.

Points Received: **1 of 1**

Comments:

Question 41 Question :

Aseptic means

Student Answer:

- ☐ sterile.
- ☐ free of all microbes.
- ☐ clean.
- ☐ sanitized.
- ☒ free of pathogens.

Points Received: **1 of 1**

Comments:

Question 42 Question :

Which of the following is a sterilizing agent?

Student Answer:

- ☐ ozone
- ☒ hydrogen peroxide
- ☒ peracetic acid
- ☐ dish soap

☐ ozone and hydrogen peroxide

Points Received: **0 of 1**

Comments:

Question 43 Question :

.

The process of filtration is a(n)

Student Answer:

- ☐ disinfectant method.
- ☒ sterilizing method.
- ☐ sanitization method.
- ☐ antiseptic procedure.
- ☐ ineffective method for removing microbes.

Points Received: **1 of 1**

Comments:

Question 44 Question :

.

Which of the following is NOT a characteristic of a genus name?

Student Answer:

- ☒ it is usually an adjective.
- ☐ it is written before the specific epithet.
- ☐ it is always capitalized.
- ☒ it is either underlined or in italics.
- ☐ it is one of two names used to identify an organism.

Points Received: **0 of 1**

Comments:

Question 45 Question :

Acidic dyes

Student Answer:

- ☐ work best in low pH environments.
- ☐ are negatively charged.
- ☐ are used for staining negatively charged molecular structures.
- ☒ are lipid soluble.
- ☒ are negatively charged and work best at low pH.

Points Received:

0 of 1

Comments:

Question 46 Question :

All of the following are associated with smear preparation EXCEPT

Student Answer:

- ☒ agglutination of the specimen.
- ☐ spreading the specimen onto a slide.
- ☐ fixation using heat.
- ☒ killing the microbes in the specimen.
- ☐ fixation using methanol or formalin.

Points Received:

0 of 1

Comments:

Question 47 Question :

The Gram stain works because of differences in the _____ of

bacteria.

Student Answer:

- ☐ genetic characteristics
- ☒ cell walls
- ☐ cell membranes
- ☒ antigens
- ☐ capsules

Points Received:

0 of 1

Comments:

Question 48 Question :

The metabolic processes called fermentation

Student Answer:

- ☐ produce substrates for the Krebs cycle.
- ☐ are alternatives for the pentose phosphate pathway.
- ☒ use an organic molecule as a final electron acceptor.
- ☐ occur only when oxygen is readily available.
- ☐ produce substrates for glycolysis.

Points Received:

1 of 1

Comments:

Question 49 Question :

Which of the following is an incorrect pairing?

Student Answer:



protozoa: multicellular



fungi: cell walls



algae: aquatic and marine habitats



prokaryotes: no nuclei



viruses: acellular parasites

Points Received:

1 of 1

Comments:

Question 50 Question :

Who discovered penicillin?

Student Answer:



Fleming



Ehrlich



Kitasato



Pasteur



Domagk