Default for BIO217 Exam
The default category for questions shared in context 'BIO217 Exam'.
top
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Fill in the Blank (FBQs)
FBQ1
Flagella is a ______________ organelle in protozoa.

Locomotory
1.0000000

0.0000000
FBQ2
Amoeba and Paramecium are examples of ______________

Protozoa
1.0000000

0.0000000
FBQ3
Some species of bacteria are able to change their forms especially when grown on artificial media. They are said to be ______________

Pleomorphic
1.0000000

0.0000000
FBQ4
___ is a sealed heating device that allows the entrance of steam under pressure.

An autoclave
1.0000000
Autoclave
1.0000000
FBQ5
The ______________ growth Phase in which the microorganisms are dividing at the maximal rate would be determined by their genetic potential, the nature of the medium, and the environmental conditions under which they are growing

Exponential
1.0000000

0.0000000
FBQ6
The _ can be expressed mathematically as

growth rate (R)
1.0000000

growth rate
1.0000000
FBQ7
Measurement of Total Cell Number is done using _____

Spectrophotometry
1.0000000

0.0000000
FBQ8
The _____ of a mold consists of long branched threadlike filaments of cells called hyphae.

Thallus
1.0000000

0.0000000
FBQ9
Microbial population death is exponential or logarithmic means that the population will be reduced by the same fraction at _____

constant interval
1.0000000

0.0000000
FBQ10
_____ are large thick walled spores formed when the tips of two sexually compatible hyphae or gametagia fuse together.

Zygospores
1.0000000

0.0000000
FBQ11
Yeasts can reproduce asexually by ___ and traverse division.

budding
1.0000000

0.0000000
FBQ12
The killing of _____ is accomplished by applying steam under pressure at a temperature of 121oC

Heat-resistant
1.0000000
Heat resistant
1.0000000

0.0000000
FBQ13
_____ agent is a natural or synthetic chemical that kills or inhibits the growth of microorganisms.

An antimicrobial
1.0000000
Antimicrobial
1.0000000
FBQ14
The various morphology types of viruses results from the combination of a particular type of capsid symmetry with the presence or absence of an envelope which is a lipid layer external to the _____

Nucleocapsid
1.0000000

0.0000000
FBQ15
Algae are unicellular microorganisms that have _____ and are photosynthetic.

Chlorophyll
1.0000000

0.0000000

0.0000000
FBQ16
Small aquatic forms of algae make up a large part of the free-floating microscopic life in water called _____

Plankton
1.0000000

0.0000000
FBQ17
Heavy algal growth may form _____ which interfere with the use of some natural waters for recreational purposes

Blanket
1.0000000
Mat
1.0000000
FBQ18
In sexual reproduction, the process of the fusion of two algal gametes that are different is called _____

Heterogamous
1.0000000

0.0000000
FBQ19
In parasitic protozoa, the developmental stages are often transmitted from host to host within a _____

Cyst
1.0000000

0.0000000
FBQ20
Each has The single site on the circular chromosome at which replication starts is called the _____

origin of replication
1.0000000
Origin
1.0000000

0.0000000
FBQ21
If a young, actively growing microbial culture is transferred to a fresh medium of the same composition, the _____ will be short or absent.

lag phase
1.0000000

0.0000000
FBQ22
_____ is the time required for a population to double.

Generation time
1.0000000
G
1.0000000

0.0000000
FBQ23
An apparatus designed to permit the growth of bacterial cultures at controlled rates and constructed so that sterile medium is fed into the culture vessel at the same rate as the spent media containing microorganisms is removed is referred to as _____

Chemostat
1.0000000

0.0000000
FBQ24
The use of an oven at a temperature of 150 to 160oC for 2 to 3 hours can also be used to sterilise _____

glass wares
1.0000000
Glasswares
1.0000000

0.0000000
FBQ25
_____ is defined as the science of biological classification.

Taxonomy
1.0000000

0.0000000

0.0000000
FBQ26
_____ classification is the grouping of microorganisms together based on the mutual similarity of the phenotypic characteristics.

Phenotypic
1.0000000

0.0000000
FBQ27
_____ similarity is often a good indication of phylogenetic relatedness.

Morphological
1.0000000

0.0000000
FBQ28
_____ are the earliest and the simplest group of fungi.

Chytridiomycetes
1.0000000
Chytrids
1.0000000
Chytridiomycetes or Chytrids
1.0000000
FBQ29
All known species of glomeromycetes form _____ with the roots of herbaceous plants.

Endomycorrhizae
1.0000000
arbuscular mycorrhizae
1.0000000

0.0000000
FBQ30
_____ can be defined as a change in the nucleotide sequence of DNA

Mutation
1.0000000

0.0000000
FBQ31
A _____ is a strain of any cell or virus carrying a change in the nucleotide sequence.

Mutant
1.0000000

0.0000000
FBQ32
The carbon cycle primarily involves the transfer of _____ and organic carbon between the atmosphere where carbon occurs principally as inorganic CO2 and the hydrosphere and lithosphere which contain varying concentrations of organic and inorganic compounds.

carbon dioxide
1.0000000
CO2
1.0000000

0.0000000
FBQ33
Biogeochemical cycling of elements is the movement of materials via biochemical reactions through _____

Biospheres
1.0000000

0.0000000
FBQ34
In the _____ growth phase, although the cell is metabolically active synthesizing new components, there is no cell division and growth.

Lag
1.0000000

0.0000000
FBQ35
Yeasts can reproduce asexually by _____ and traverse division.

Budding
1.0000000

0.0000000
Multiple Choice Questions (MCQs)
MCQ1

The diagram above is an example of ___.

Prokaryotic cell

1.0000000
Animal cell

0.0000000
Eukaryotic cell

0.0000000
Plant cell

0.0000000
MCQ2
Inoculating loops used in the laboratory during the culturing of bacteria can be sterilised in

A bench top incinerator

1.0000000
An autoclave

0.0000000
A water bath

0.0000000
An oven

0.0000000
MCQ3
In bacteria, genetic recombination does not result from _____

Conjugation

0.0000000
Transduction

0.0000000
Detection

1.0000000
Transformation

0.0000000
MCQ4
Which of the following is not a peculiar feature of the biogeochemical cycles?

Elements required are in five forms and mostly from living reservoir in the atmosphere.

1.0000000
The elements go in cycle and are always free in inorganic state in abiotic environment and when needed in biotic environment, they are turned to organic state.

0.0000000
The biogeochemical cycles are complex and they involve the activity of producers, consumers and decomposers.

0.0000000
All organisms participate directly in recycling by removing, adding or altering nutrients.

0.0000000
MCQ5
The concept of spontaneous generation states that ___.

living organisms could develop from non-living matter

1.0000000
living organisms can only develop from living matter

0.0000000
living organisms develop from maggots

0.0000000
Living organisms cannot develop from decomposing matter

0.0000000
MCQ6
That microorganisms are the cause of infectious diseases is referred to as ___

Theory of spontaneous generation

0.0000000
Sterilization theory

0.0000000
Theory of regeneration

0.0000000
Germ Theory of Disease

1.0000000

MCQ7

What does the scheme above represent?

Kochâ€™s postulate

1.0000000
Contamination scheme

0.0000000
Infection scheme

0.0000000
Robertâ€™s postulate

0.0000000
MCQ8
The following are basic aspects of microbiology except ___

Medical microbiology

1.0000000
Biochemistry

0.0000000
Algology

0.0000000
Microbial cytology

0.0000000
MCQ9
Which of the following is not an expected future challenge for microbiology?

Finding new approach to new and re-emerging diseases

0.0000000
New approach to increase environmental pollution and climate change

1.0000000
Investigating biological problems

0.0000000
Bioremediation

0.0000000

MCQ10
In a compound microscope, the magnified image formed by the objective lens is further enlarged by ___

Oil immersion lenses

0.0000000
Convex lenses

0.0000000
Concave lenses

0.0000000
one or more additional lenses

1.0000000
MCQ11
Based on their source of energy bacteria are classified as ___

Phototrophs and chemotrophs

1.0000000
Aerobic or strict aerobes

0.0000000
Heterotrophs and autotrophs

0.0000000
Anaerobic bacteria or strict anaerobes

0.0000000
MCQ12
These are stick like bacteria with rounded, square, tapered or swollen ends. They measure 1-10Âµm in length by 0.31.0Âµm in width. Which shape of bacteria does this describe?

Rod

1.0000000
Diplococci

0.0000000
Vibrios

0.0000000
Treponemes

0.0000000
MCQ13

Uncommon shapes of bacteria includes the following except

pear shaped cells

0.0000000
lobed spheres

0.0000000
Palisade arrangement cells

1.0000000
rods with helically sculptured surfaces

0.0000000
MCQ14
Which of the following describes flagella?

They parts of the bacterium with several components and structures; some are external to the cell wall while others are internal to the cell wall

0.0000000
These are helical bacteria, small, regularly coiled, rigid, organisms measuring 3-4Âµm in length. Each coil measures about 1Âµm, e.g. Spirillum minus

0.0000000
These are hair like, helical appendages that protrude through the cell wall, 0.01 â€“ 0. 02Âµm in diameter and simple in structure. Based on their location on the cell, they may be polar or lateral.

1.0000000
Uncommon

0.0000000
MCQ15
Which of the following best explain the functions of bacterial sheaths?

They increase surface area of the cell for nutrient absorption. Some sheaths also have adhesive substances that aid attachment to surfaces.

1.0000000
Increase surface area of the cell for nutrient absorption

0.0000000
They aid attachment of the bacterial cell to surfaces because of the adhesive substances.

0.0000000
They are simple ornamentations that have no function.

0.0000000
MCQ16
Structures internal to the cell wall include the following except

Cytoplasmic Membrane

0.0000000
Protoplast

0.0000000
Cytoplasm

0.0000000
Cilia

1.0000000
MCQ17
What is fungal mycelium?

Fungal mycelium is a complex of several filaments called hyphae.

1.0000000
Fungal mycelium is the cell wall.

0.0000000
Fungal mycelium is cytoplasmic streaming.

0.0000000
Fungal mycelium is uninterrupted protoplasmic streaming.

0.0000000
MCQ18
Reproduction in fungi can either be ___ or ___.

fission or fragmentation

0.0000000
asexual or sexual

1.0000000
aerobic or hydrolytic

0.0000000
Anaerobic or aerobic

0.0000000
MCQ19
What is sexual reproduction?

Sexual reproduction is a type of reproduction involving only one parent that produces genetically identical offspring.

0.0000000
Sexual reproduction is a type of reproduction involving only one parent that produces genetically identical offspring by budding or by the division of a single cell or the entire organism into two or more parts

0.0000000
Sexual reproduction is a type of reproduction in which two parents give rise to offspring that have unique combinations of genes inherited from the gametes of the two parents

1.0000000
Sexual reproduction is a type of reproduction in which one parent gives rise to offspring that have unique combinations of genes not inherited from the gametes of the parent.

0.0000000
MCQ20
Which of the following is not a method of sexual reproduction in fungi?

Antheridium

1.0000000
Spermatization

0.0000000
Gamete-gametangial copulation

0.0000000
Somatic copulation

0.0000000
MCQ21
Which of the following is not a beneficial use of fungi?

Fungi act as decomposers.

0.0000000
Moulds and yeasts are used in many industrial processes like fermentation.

0.0000000
Fungi do not cause disease to man and animal but to plants.

1.0000000
Fungi are useful in the production of antibiotics.

0.0000000
MCQ22
The following are characteristics of viruses except

They are acellular.

0.0000000
They only reproduce when present within living cells.

0.0000000
Most viruses can only be viewed under an electron microscope.

0.0000000
They are not infectious agents.

1.0000000
MCQ23
Which of the following is not a function of viral capsids?

The capsid surrounds and protects the viral nucleic acid.

0.0000000
Capsids self-assemble from many copies of one or a few types of proteins

1.0000000
The capsid gives the virus a characteristic shape.

0.0000000
The capsid helps to establish the specificity of the virus for a particular host cells.

0.0000000
MCQ24
Which of the following is not a type of capsid symmetry?

Helical

0.0000000
Icosahedral

0.0000000
Complex

0.0000000
Bacteriophage

1.0000000
MCQ25
Which of the following is correct about the first step in the life cycle of a virus and host?

The first step in the life cycle of a virus is attached to a host because viruses are enveloped in a host.

0.0000000
The first step in the life cycle of a virus is attached to a host because a virus differs from a cell.

0.0000000
The first step in the life cycle of a virus attached to a host because viruses need a host cell in which to reproduce.

1.0000000
MCQ26
Which of the following is a reason why viruses cannot be cultured in the same way as prokaryotic and eukaryotic microorganisms?

Viruses are unable to reproduce independent of living cells

1.0000000
Viruses are the smallest microorganisms

0.0000000
Viruses are particles and a complex entity is called a virion.

0.0000000
Viral genome is replicated and viral proteins are synthesised

0.0000000
MCQ27
How are animal viruses cultured?

By inoculating suitable host animals, embryonated egg or in tissue (cell) culture on monolayers of animal cells

1.0000000
By inoculating in non-host animal tissue culture.

0.0000000
By cultivating in either broth or agar cultures of young, actively growing cells.

0.0000000
In plant tissue cultures, cultures of separated cells, or cultures of protoplasts.

0.0000000
MCQ28
The quantity of viruses in a sample can be determined directly by

differential and density gradient centrifugation

0.0000000
counting particle numbers using the electron microscope.

1.0000000
precipitation of viruses particles

0.0000000
denaturation of contaminants

0.0000000
MCQ29
The quantity of viruses in a sample can be determined indirectly by

counting particle numbers using the electron microscope

0.0000000
Purification of the virus particles

0.0000000
enzymatic digestion of host cells constituents

0.0000000
measurement of an observable effect of the virus using techniques such as the hemaglutination assay

1.0000000
MCQ30
Which of the following is not true of algae?

Algae are heterogeneous and range from microscopic unicellular forms to macroscopic seaweeds.

0.0000000
Many live in aquatic environments but many also thrive as subterranean algae.

0.0000000
Single algal cells are complete organisms capable of photosynthesis and synthesizing other compounds which constitute the cell.

0.0000000
Algae are multicellular organisms.

1.0000000
MCQ31
Algae are found where there are sufficient amount of the following to sustain them except

Simple nutrients

0.0000000
light

0.0000000
moisture

0.0000000
competition

1.0000000
MCQ32
Biological and economic importance of algae include the following except

Algae are primary producers

0.0000000
Commercial products such as agar, alginic acid and carrageenan are extracted from the wall of algae

0.0000000
Many algal species, mostly as red and brown algae, are used as food.

0.0000000
Algae are photosynthetic eukaryotic microorganisms.

1.0000000
MCQ33
Multicellular algae and appear in every conceivable forms, shape and degree of complexity including the following except

Membranous colonies,

0.0000000
Zoospores

1.0000000
Singly or in clusters with individual strands which may be branched or unbranched tubes

0.0000000
Filaments grouped

0.0000000
MCQ34
What are the features that distinguish protozoa from other eukaryotic protists?

Other eukaryotic protists are found in a variety of habitats and their distribution is influenced by moisture, temperature, light, available nutrients, and other physical and chemical conditions.

0.0000000
Protozoa are not different from other eukaryotic protists.

0.0000000
Their ability to move at some stage of their life cycle and by their lack of cell walls.

1.0000000
Some algae live in mutualistic association with other organisms.

0.0000000
MCQ35
Which of the following is not an applied aspect of microbiology?

Agricultural microbiology

0.0000000
Aquatic and Marine Microbiology

0.0000000
Aeromicrobiology

0.0000000
Bacteriology

1.0000000