BACTERIA AND VIRUSES

1. Microscopic organisms such as bacteria, yeast, and single cell protozoa are studied in microbiology as well as \_\_\_\_\_\_
2. Viruses
3. Large animals
4. Plants such as mosses and cedar trees
5. Small animals such as mice and jelly fish

Correct answer : A

Hint; Microscopic organisms such as bacteria, yeast, and single cell protozoa are studied in microbiology as well as Viruses

1. Latent viruses are present in cell as:
2. Capsids
3. Enzymes
4. Prophages
5. Proviruses

Correct answer : D

Hint ; Latent viruses are present in cell as Proviruses

1. Which of the following bacterium is commonly found on skin?
2. Staphylococcus aureus
3. Acetobacter aceti
4. Actinobacillus lignieresii
5. Mycoplasma cynos

Correct answer : A

Hint; **Staph** infections are **caused** by **staphylococcus bacteria**, types of germs commonly found on the skin or in the nose of even healthy individuals

1. Bacteria are
2. Unicellular and eukaryotic
3. Unicellular and prokaryotic
4. Made up of no cells
5. Multicellular and prokaryotic

Correct answer : B

Hint; Bacteria and archaea are all **unicellular prokaryotes**

1. Which type of bacteria has a thick peptidoglycan layer and teichoic acid polymers?
2. Gram-negative
3. Gram-positive
4. Acid-fast bacteria
5. All of the choices

Correct answer : B

Hint; **Gram**-**positive** bacteria retain the color of the crystal violet stain in the **Gram** stain. This is characteristic of bacteria that have a cell wall composed of a thick layer of a particular substance (called peptidologlycan)**.**

1. Which of the following organisms is not a type of eukaryotic organisms?

a. Fungus

b. Helminths

c. Protistans

d. Bacteria

Correct answer : D

Hints; The types of eukaryotic organisms is Fungus, Helminths and Protistans

1. which of the following causes an infection of the liver?
2. Salmonella
3. Shigella
4. Hepatitis A virus
5. Vibrio

Correct ans : C

Hint; The most common types of liver infection are **hepatitis A viruses**

1. What are the reproductive cells of fungi?
2. Seeds
3. Sperm
4. Spores
5. Eggs

Correct ans : B

Hint; **Fungi** reproduce asexually by fragmentation, budding, or producing spores

1. Some Example of viruses are chicken pox, flu, and colds

True or false

Ans: true

Hint; Viruses are cause of chicken pox, flu, and colds

1. Viruses are spread via blood, food, wind, water, or bodily secretions

True or false

Ans: true

Hint; Viruses are spread via blood, food, wind, water, or bodily secretions

1. Bacteria can obtain energy from their food because they do not have a mitochondria

True or false

Ans: false

Hint; Bacteria cannot obtain energy from their food because they do not have a mitochondria

1. SARS is caused by a virus that affects the lower respiratory system

True or false

Ans: true

Hint; SARS is caused by a virus that affects the lower respiratory system

1. Cows are the reservoir or “mixing bowl” for both the animal and human strains of the influenza virus

True or False

Correct ans; False

Hint; Birds and pigs are the reservoir or “mixing bowl” for both the animal and human strains of the influenza virus

1. Bacteria can break down substances. Breaking down is called
2. Decomposing
3. Consuming
4. Eating
5. Producing

Ans: A

Hint; Decomposing bacteria can break substances

1. The virus causes cold sores
2. The Herpus virus
3. The Norwalk virus
4. The Human Papilloma Virus
5. The Rubeola Virus

Correct ans: A

Hint; Cold sores are caused by certain strains of the **herpes simplex virus**

FUNGI AND PROTOZOA

1. If all fungi in an environment that perform decomposition were to suddenly die, then which group of organisms should benefit most, due to the fact their fungal competitors have been removed?
2. Plants
3. Protists
4. Prokaryotes
5. Mutualistic fungi

Correct ans : C

Hint; Photosynthetic **prokaryotes** remove atmospheric carbon dioxide and fix it into sugars

1. When a mycelium infiltrates an unexploited source of dead organic matter, what are most likely to appear within the food source soon thereafter?
2. Fungal haustoria
3. Soredia
4. Fungal enzymes
5. Increased oxygen levels

Correct ans: C

Hint; **Fungal Enzyme** absorbs nutrients from its environment through its **mycelium** in a two-stage process.

1. Fungi are classified into three common phyla based on their:
2. Taste
3. Mycelium
4. Smell
5. Reproductive Strutures

Correct ans: D

Hints; **The major** divisions (**phyla**) of **fungi** have been **classified based** mainly on **their** sexual reproductive structures.

1. What are the cell walls of fungi made up of?
2. Cellulose
3. Lipids
4. Chitin
5. Polysaccharides

Correct ans : C

Hints; The fungal cell wall is a complex and flexible structure composed basically of **chitin**

1. Chitin is found in fungi and in:

1. Insects
2. Humans
3. Plants
4. Bacteria

Correct ans; A

**Hints; Chitin can found** in the exoskeletons of crabs, prawns, insects, and even in the cell walls

1. What are fungi called because they live on dead or decaying organic material?
2. Saprophyte
3. Mutualist
4. Autotroph
5. Parasite

Correct ans : A

Hints; **Saprophytes** are organisms that can't make their own food. In order to survive, they feed on dead and decaying matter

1. Protozoans are members of the kingdom
2. Animalia
3. Plantae
4. Fungi
5. Protista

Correct ans; D

Hint; Protozoan are grouped in the kingdom protista

1. One characteristics that is not found in any protozoan is
   1. Heterotrophy
   2. Multicellularity
   3. Motility
   4. Parasitism

Correct ans : b

Hint; The characateristics of protozoan is Heterotrophy, Motility, parasitism

1. All protist are capable of
2. Asexual reproroduction
3. Sexual reproduction
4. Either asexual or sexual reproduction
5. Conjugation

Correct ans : C

Protist are capable of Asexual or sexual reproduction

1. Which of the following is not a class of protozoa?
2. Flagellate
3. Sporozoan
4. Bacteria
5. Amoeboid

Correct ans: C

Hint; Bacteria is not a class of protozoa

1. The type of protozoan that uses pseudopods to move is
2. A ciliate protozoan
3. An amoeboid protozoan
4. A sporozoan
5. An algae

Correct ans ;B

Hints; The **kind of protozoan** that **moves using pseudopods** is the amoeba.

1. Protozoa can get their food by
2. Eating algae.
3. Eating dead organic material.
4. Preying on other organisms and engulfing and digesting them.
5. All of the above.

Correct ans; D

Hints; Protozoa can eat algae and dead organic material

1. Basidiospores are not produced by mushrooms

True or False

Correct ans; false

Hint: Basidiospores are produced by mushrooms

1. Zygospores are found in saclike structures produced by specialized hyphae

True or False

Correct ans; False

Hint: Ascus are found in saclike structures produced by specialized hyphae

1. Specialized hyphae called haustoria penetrate the cells of a host tree and provide additional surface for absorption of water and minerals

True or False

Correct ans: True

Hint; Specialized hyphae called haustoria penetrate the cells of a host tree and provide additional surface for absorption of water and minerals

1. A unique feature of fungal decomposition is that organic material is digested inside the fungal cells

True or false

Correct ans; False

Hint: A unique feature of fungal decomposition is that organic material is digested outside the fungal cells

1. No fungus contains chlorophyll in its hyphal cells

True or false

Correct ans; True

Hint: No fungus contains chlorophyll in its hyphal cells

1. Bacteria and eukaryotes arose from the same kind of primordial cell.

True or false

Correct ans; True

Hint; Bacteria and eukaryotes arose from the same kind of primordial cell.

1. Hyphae that are divided into compartments by cross walls are called separate hyphae.

True or false

Correct ans; True

Hint; Hyphae that are divided into compartments by cross walls are called separate hyphae

1. Protist are eukaryotic

True or false

Correct ans; True

Hint; Protist are eukaryotic

AlGAE, ARCHAEA and Prions

1. Why are dinoflagellates commonly called “fire algae?”
2. They produce sparks when nearby other algae
3. Other organism fell a burn when they come into contact with dinoflagellates
4. They are bioluminescent
5. Their toxins produce red tide, which looks like fire

Correct ans; C

Hint; **Dinoflagellates** are the bioluminiscent algae. They have pigment luciferin, which is acted upon by the enzyme luciferase causing production of light without any heat, thus the **name fire algae**.

1. Brown Algae most often grows…
2. On trees
3. In rivers
4. Rocky seashores
5. Dry land

Correct ans; C

Hint; **most brown algae** are marine, and the majority **grow** in the intertidal and upper sublittoral zones. They inhabit rocky seashores

1. Kelp is a type of which algae?
2. red
3. green
4. brown

Correct ans ; C

Hint; **Kelp is a brown algae** that grow as large coastal seaweeds in colder seas

1. Why do the majority of red algae live in deep marine waters?
2. They thrive in cold water
3. They can absorb red light
4. They can absorb blue light
5. They don’t, the prefer shallow waters

Correct ans; C

Hint; Red algae can absorb blue light

1. What are 4 types of green algae?
   * 1. Dulles, Volvox, Kelp, Spirogyra
     2. Volvox, Spirogyra, Ulva, Chlamydomonas
     3. Sargassum, Rockweed, Ulva, Dulles
     4. Irish Moss, Kelp, Chlamydomonas, Sargassum

Correct ans; B

Hint; The 4 types of green algae is Volvox, Spirogyra, Ulva, Chlamydomonas

1. What is the ecological value of green algae?
2. Producers
3. Decomposers
4. Habitats
5. Food thickeners

Correct ans; A

Hint; **Green Algae** as Animal and Human Food and Medicine

1. The prokaryotic domains are
2. Bacteria and Eukarya.
3. Bacteria and Archaea.
4. Archaea and Eukarya.
5. Prokarya and Bacteria.

Correct ans; B

Hint : Prokaryotes include the bacteria and Archaea

1. What is the symptom of the novel prion disease?
2. Kidney Stones
3. Fever
4. Diarrhea and autonomic neuropathy
5. Headache

Ans : C

# Hint : A Novel Prion Disease Associated with Diarrhea and Autonomic Neuropathy

1. What root words generated the name Prions?
2. Proton invasion of people
3. Protein Ruminant Protease
4. People Running Poorly
5. Proteinaceous Infectious Particle

Ans : D

Hint : The **word prion** derives from "proteinaceous infectious particle.

1. Where do archaea live?
2. Just in ocean.
3. Everywhere, except for harsh environments.
4. Everywhere, including really harsh environments
5. Just down the road, at the corner and Main

Correct ans; C

Hint; Archaea can live in a harsh environments

1. What makes Archaea different from bacteria?
2. They are unicellular
3. They have a rugged cell
4. They don’t have any membrane-bound organelles
5. They take on many different shapes and forms

Correct a ns; B

Hint; **Archaea** is a group of primitive prokaryotes that based on their **distinct** characteristics form a **separate** domain from **bacteria** and eukaryotes

1. True or false? Archae can be phototrophic
2. True
3. False
4. A few are chemotrophic
5. Nobody knows

Correct ans; A

Hint; Archaea can make their own food

1. Which kind of archaea live in extremely warm environment?
2. Halophiles
3. Thermophiles
4. Methanogens
5. Psychophiles

Correct ans; B

Hint; **Archaea** that **live in extremely hot environments** are called thermophiles

1. Prions \_\_\_\_\_\_ goods protein.
2. Create
3. Eat
4. Misfold

Correct ans; C

Hints; Prions misfold goods protein

1. One prion can lead to the misfolding of many proteins in the brain.

True or False

Correct ans; True

Hint; One prion can lead to the misfolding of many proteins in the brain

1. When \_\_\_\_ get prions in the brain it is called Creutzfeldt-Jacob Disease.
2. Bovine
3. Humans
4. Cattle

Correct ans; B

Hint; When get prions in the brain it is called Creutzfeldt-Jacob Disease.

1. Prions CANNOT be destroyed by radiation or high temperatures.

True or False

Correct ans; True

Hint; Prions CANNOT be destroyed by radiation or high temperatures

1. The abnormally folded proteins in the brain bind together and make\_\_\_\_\_ in the brain.
2. Cows
3. Parties
4. Eggs
5. Holes

Correct ans; holes

Hint; The abnormally folded proteins in the brain bind together and make holes in the brain.

1. A protein can function properly if it is unfolded

True or False

Correct ans; True

Hint; A protein can function properly if it is unfolded

1. Prions infect humans and animals when they eat infected meat.

True or false

Correct ans; True

Hint; Prions infect humans and animals when they eat infected meat.

1. Prions can reproduce. They are alive

True or false

Correct ans; False

Hint; Prions cannot reproduce.

1. Prions make new prions by changing the shape of healthy proteins.

True or false

Correct ans; true

Hint; Prions make new prions by changing the shape of healthy proteins.

1. A symptom of BSE and Creutzfeldt-jakob(prion disease) is memory loss and difficulty walking.

True or false

Correct ans; true

Hint; A symptom of BSE and Creutzfeldt-jakob(prion disease) is memory loss and difficulty walking

1. Brain disease caused by prions cannot be treated with antibiotics

True or false

Correct ans; True

Hint; Brain disease caused by prions cannot be treated with antibiotics

1. A single prion in the brain will lead to many prions and finally death

True or false

Correct ans;True

Hint; A single prion in the brain will lead to many prions and finally death

Bacteria and Viruses

1. A virus is a tiny infectious?
2. Cell
3. Living thing
4. Particle
5. Nucleic acid

Ans : Particle

Hint : A virus is a tiny, infectious particle that can reproduce only by infecting a host cell.

1. Viruses are known to infect?
2. Plants
3. Bacteria
4. Fungi
5. All oranisms

Ans : All organisms

Hint : Viruses are known to infect various types of cells found in plants, animals, fungi, protists, bacteria, and archaea. Viruses typically have limited host ranges and infect specific cell types.

1. A prophage is a stage in the development of a/n?
2. Bacterial virus
3. Poxvirus
4. Lytic virus
5. Envloped virus

Ans : A

Hint : A **prophage** is an inactive bacterial virus which is inserted into a host's chromosome.

1. In general RNA viruses multiply in the cell \_\_\_\_\_ and DNA viruses multiply in the cell \_\_\_\_\_\_?
2. Nucleus, cytoplasm
3. Cytoplasm, nucleus
4. Vesicles, ribosomes
5. Endoplasmic reticulum, nucleolus

Ans: B

Hint : Deoxyribonucleic Acid (**DNA**) is found mainly in the nucleus of the cell, while Ribonucleic Acid (**RNA**) is found mainly in the **cytoplasm** of the cell although it is usually synthesized in the nucleus.

1. Viruses cannot be cultivated in/or?
2. Tissue culture
3. Bird embryos
4. Live mammals
5. Blood agar

Ans: D

Hint : **Viruses** are obligate intracellular parasites so they depend on host for their survival. They **cannot be grown** in non-living culture media or on Blood **agar** plates alone, they must require living cells to support their replication

Fungi and protozoa

1. Yeast infections are caused by
2. Candida albicans
3. Stachybotrys
4. Chemoheterotrophs
5. Dermatophytes

Ans : A

Hint: Candida albicans yeast infections may occur in the mouth as thrush or as vulvovaginal candidiasis in females.

1. Which mode of nutrition do fungi possess?
2. Chemoheterotrophs
3. Photosynthesizers
4. Candida albicans
5. Dermatophytes

Ans: A

Hint : Fungi require organic compounds for energy and carbon

1. Fungi that infect only the epidermis, hair, and nails are
2. Dermatophytes
3. Yeasts
4. Chemoheterotrophs
5. Stachybotrys

Ans: A

Hint : Dermatophytes secrete keratinase, which digest keratin found in hair, nails and skin.

1. Under certain adverse conditions, some protozoa produce a protective capsule. Is this a?
2. Spore
3. Cyst
4. Cancer cell
5. All of the above

Ans : B

Hint : A cyst permits the organisms to survive when food, moisture, or oxygen are lacking

1. Entamoeba histolytica belongs to which group?
2. Helminths
3. Protozoa
4. Bacteria
5. Fungi

Ans : B

Hint : This protozoan is the cause of amoebic dysentery

Algae, Archaea and prions

1. Prions cannot be destroyed by radiation or high temperatures.

True or false

Ans : True

Hint: Prions cannot be destroyed by radiation or high temperatures

1. A protein can function properly if it is unfolded.

True or false

Ans : False

Hint : protein cannot function properly if it is unfolded

1. Prions infect humans and animals when they eat infected meat.

True or false

Ans : True

Hint : Prions infect humans and animals when they eat infected meat

1. Prions cannot reproduce. They are not alive.

True or False

Ans : True

Hint : Prions cannot reproduce. They are not alive.

1. A single prion in the brain will lead to many prions and finally death.

True or False

Ans : True

Hint : A single prion in the brain will lead to many prions and finally death