1-Why would a temperate phage chose lysogenic infection over lytic infection when the environment has low nutrients?

A. Lysogenic infection results in fewer mutations for the virus

B. Lysogenic infection is always preferred over lytic infection

**C. Low nutrients would result in an unproductive lytic infection**

D. Lytic infection results in fewer mutations for the virus

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2-What is an allosteric site on a protein?

A. It is the active site where the inhibitor binds

B. It is the active site where the substrate binds

C. A region where another cell binds to change the shape of the protein

**D. It is a region where a small molecule binds to change the shape of the protein**

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3- Why would dry skin protect against infections?

A. This would promote immune cells migrating to the skin.

**B. This would stop metabolism of microbes**

C. This allows secretions of antibiotics

D. This would promote inflammation

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4-What happens if 1 nucleotide is deleted from a gene?

A.The resulting protein will have 1 less amino acid.

**B. The reading frame will be shifted and a different protein will be made**

C. The resulting protein will have 1 more amino acid.

D. The resulting protein will not be changed

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5- In the experiment where transformation was discovered, why does mixing the live non-capsule strain with the dead capsule strain result in a new strain that is capable of killing the mouse?

**A. The non-capsule strain took up a gene from the dead capsule strain**

B. The non-capsule strain created its own gene to make a capsule

C. The non- capsule strain took up a gene from another strain that was still alive

D. The capsule stain took up a gene from the non-capsule strain

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6-What causes a spontaneous mutation in a gene?

**A. DNA polymerase randomly makes a mistake during DNA replication**

B. RNA polymerase causes the mutation during transcription.

C. The cell purposefully makes the mutation to adapt

D. The ribosome adds the wrong amino acid during translation

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7-Why would a temperate phage chose to exit lysogenic infection and enter lytic infection wher host has been damaged by UV?

A.Lytic infection is always preferred over lysogenic Infection

**B. Lytic infection is more productive in the presence of UV**

C. Lytic infection results in fewer mutations for the virus

D. This would allow the virus to escape a dying cell

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8- Eukaryotic organisms

A. Are all multi-cellular

B.Only include large organisms like parasitic-worms

**C. Can be unicellular or multicellular**

D. Cannot undergo photosynthesis

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9- Why do lysozymes in bodily secretions protect against Infections ?

**A. They kill microbes by breaking down the peptidoglycan in their cell walls**

B. They kill microbes by degrading their DNA

C. They kill microbes by osmosis

D. They kill microbes by inhibiting enzyme

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10- Why is it important that the newly acquired DNA (either from transformation, transduction, o conjugation) has an origin of replication?

A. It helps the new DNA integrate into the chromosome for further replication

**B. It allows the new DNA to be replicated and passed down to new cells**

C. It codes for an antibiotic resistance gene

D. It protects the chromosome from mutations

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11- Why does the salt in your sweat protect against infection?!

A.It kills microbes by diffusion

B.This would promote immune cells migrating to the skin

**C.It kills microbes by osmosis**

D. This would promote inflammation

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12- Why would a lytic virus want to stop expression of the host's genes?

A. To help the host stay alive for integration of the viral genome

B. To help generalized transduction

C. To stop the waste of energy for a higher production of virus particles

**D. To help pass the viral genome to another host by conjugation**