Assignment 6

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2019-03-13, 23:59 IST.

1) State which is correct:
A. During symbiosis non-phototrophic motile bacteria is dependent on phototrophic non-motile bacteria.
B. Motility helps in adjusting rapidly to the changing levels of light, oxygen and sulfide.

   - Statement A and Statement B both are correct and Statement B is correct explanation of Statement A.
   - Statement A and Statement B both are correct but Statement B is not a correct explanation of Statement A.
   - Either Statement A or Statement B is incorrect.
   - Both are incorrect statements.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Statement A and Statement B both are correct but Statement B is not a correct explanation of Statement A.

2) State which step/s is/ are incorrect in the root nodule formation:

   - Recognition of the correct partners by plant and bacterium and root hairs get attached with the bacterium.
   - Nod factors are emitted by the root of the plant after proper attachment of the bacterium.
   - Bacterial invasion of the root hair and bacterium goes to main root by the help of infection thread.
   - Bacteroids are formed within the plant cell and nitrogen fixing state flourishes.
   - Cell division in both the cells occurs and mature root nodule forms.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Nod factors are emitted by the root of the plant after proper attachment of the bacterium.
1. Fistula  A. Ingested nutrients are degraded by the gut microbiota before reaching the acidic stomach and small intestine.

2. Foregut fermentation  B. Relative ability of a pathogen to cause disease.

3. Fermicutes  C. The first vessel in the multi-chambered stomach of ruminant animals in which cellulose digestion occurs.

4. Virulence  D. Sampling port implanted into the rumen of a cow to study the digestive processes and microbiology of the rumen.

5. Rumen  E. A type of Rumen bacteria.

Options:
- 1-A, 2-B, 3-C, 4-D, 5-E
- 1-B, 2-C, 3-A, 4-E, 5-D
- 1-D, 2-A, 3-E, 4-B, 5-C
- 1-C, 2-D, 3-B, 4-A, 5-E

No, the answer is incorrect.
Score: 0
Accepted Answers:
1-D, 2-A, 3-E, 4-B, 5-C

4) Say true or false:
Numbers of bacteria found in monogastric human ileum at pH 5 is around 10^8 per grams of food pulp.

Options:
- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers:
True

5) State true or false regarding one step growth curve of virus replication:
During eclipse phase, the number of infectious virions inside the host cell rises dramatically but cannot be detected in the growth medium.

Options:
- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers:
False

6) After watching this image state which statements are correct:
1 helps in attachment of T4 with E. coli cells by contacting the cell surface.
2 brings out release of an enzyme forming a small pore in the peptidoglycan layer.
3 corresponds to the DNA of the host cell taken up by the virus.
This figure shows the attachment of bacteriophage to an E.coli cell.

No, the answer is incorrect.
Score: 0
Accepted Answers:
1 helps in attachment of T4 with E. coli cells by contacting the cell surface
2 brings out release of an enzyme forming a small pore in the peptidoglycan layer.
This figure shows the attachment of bacteriophage to an E.coli cell.

7) Which of the statements are correct:

- Viroids are smallest known pathogens which cause a number of plant diseases and can have a severe agricultural impact.
- Retrovirus is a virus whose DNA genome replicates by the way of an RNA intermediate.
- A prion is a subviral agent that lacks both DNA and RNA.
- All statements are correct.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Viroids are smallest known pathogens which cause a number of plant diseases and can have a severe agricultural impact.
A prion is a subviral agent that lacks both DNA and RNA.

8) State true or false:

Prion protein Scrapie is having different conformation than prion protein Cellular from same species which converts it into pathogenic form after entering to host cell.

- True
- False
9) State which statements are correct regarding Acid mine drainage:

- Those minerals which are most readily oxidized are most amenable to microbial leaching.  
- Acid mine drainage is induced in the river systems when there is a mixing of consistently high COD and BOD drain water in these systems along with slight acidity.  
- Bioremediation is the cleanup of the oil, toxic chemicals and other pollutants by microorganisms.  
- Propagation cycle refers to inter conversion of FeS2 to Fe3+ by using Fe2+ as an oxidant.

No, the answer is incorrect.
Score: 0
Accepted Answers:
True

10) What is required to oxide CuS under anaerobic conditions?

- Chemical oxidation by other metals like iron and manganese.  
- Bacteria like ferrooxidans oxidizes CuS to SO42-.  
- Spontaneous oxidation of sulfide by ferric ion generated from bacterial oxidation of ferrous ion.  
- Burning the ore carrying copper pyrite in presence of air.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Bacteria like ferrooxidans oxidizes CuS to SO42-.  
Spontaneous oxidation of sulfide by ferric ion generated from bacterial oxidation of ferrous ion.