**BLOG WORKSHEET**

**BIOLOGY 9**

Teacher Name: Uzma Amer Class: 9 Biology Date: 22nd Oct’19

Q.1. An artificial cell containing an aqueous solution of [0.02 M sucrose, 0.01 M glucose, and 0.06 M fructose] enclosed in a selectively permeable membrane has ***just been immersed*** in a beaker containing a different aqueous solution [0.05 M sucrose, 0.03 M glucose, 0.01 M fructose]:

**“Environment” (beaker solution)**

**“Cell”**



0.06*M* fructose

0.01 M glucose

0.01*M* fructose

0.05 M sucrose

0.03 M glucose

0.02 M sucrose

The membrane is permeable to water and to the simple sugars glucose and fructose, but is completely impermeable to the disaccharide sucrose. Now answer questions 1-4, below.

1. Which solute(s) will exhibit a net diffusion into the cell?

A. Glucose and fructose B. Glucose and sucrose

C. Fructose

D. Glucose

2. Which solute(s) will exhibit a net diffusion out of the cell

A. Glucose and fructose

B. Glucose and sucrose

C. Fructose

D. Glucose

3. In which direction will there be a net osmotic movement of water?

A. From the cell into the environment (outside solution).

B. From the environment (outside solution) into the cell.

C. From the top of the beaker to the bottom of the beaker

D. From the bottom of the beaker to the top of the beaker

4. After the cell is placed into the beaker, which of the following changes would occur?

A. The artificial cell would become more flaccid (“*shriveled”; ie, would shrink)*.

B. The artificial cell would become more turgid*(“stiff; hard”; ie, would expand)*.

C. The entropy of the system (cell plus surrounding solution) would decrease.

D. The overall free energy stored in the system would increase.

|  |  |
| --- | --- |
| .5. | Stores the liver's digestive juices until they are needed by the intestines. |

|  |  |
| --- | --- |
| A. | Pancreas |

|  |  |
| --- | --- |
| B. | Gall bladder |

|  |  |
| --- | --- |
| C. | Villi |

|  |  |
| --- | --- |
| 6. | This organ stores swallowed food and liquid, mixes up digestive juices with the food and liquid and sends it to the small intestine. |

|  |  |
| --- | --- |
| A. | Small intestine |

|  |  |
| --- | --- |
| B. | Large intestine |

|  |  |
| --- | --- |
| C. | Stomach |

|  |  |
| --- | --- |
| 7. | This part of the digestive system removes solid wastes such as feces from the body. |

|  |  |
| --- | --- |
| A. | Large intestine |

|  |  |
| --- | --- |
| B. | Small intestine |

|  |  |
| --- | --- |
| C. | Esophagus |

|  |  |
| --- | --- |
| 8. | This organ produces a digestive juice that contains a wide array of enzymes to break down fat, carbohydrate and protein in food. |

|  |  |
| --- | --- |
| A. | Pancreas |

|  |  |
| --- | --- |
| B. | Liver |

|  |  |
| --- | --- |
| C. | Large intestine |

|  |  |
| --- | --- |
| 9. | An organ that produces a bodily juice called bile. |

|  |  |
| --- | --- |
| A. | Liver |

|  |  |
| --- | --- |
| B. | Pancreas |

|  |  |
| --- | --- |
| C. | Gallbladder |

|  |  |
| --- | --- |
| 10. | Tiny fingerlike projections in the small intestine. |

|  |  |
| --- | --- |
| A. | Villi |

|  |  |
| --- | --- |
| B. | Anus |

|  |  |
| --- | --- |
| C. | Rectum |

|  |  |
| --- | --- |
| 11. | A long tube that carries food from the mouth to the stomach. |

|  |  |
| --- | --- |
| A. | Trachea |

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| --- | --- |
| B. | Esophagus |

|  |  |
| --- | --- |
| C. | Urethra |

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| --- | --- |
| 12. | The final portion of the large intestine. |

|  |  |
| --- | --- |
| A. | Esophagus |

|  |  |
| --- | --- |
| B. | Rectum |

|  |  |
| --- | --- |
| C. | Gallbladder |

|  |  |
| --- | --- |
| 13. | This contains tiny glands that produce juices to digest food, found in the mouth, stomach and small intestine. |

|  |  |
| --- | --- |
| A. | Villi |

|  |  |
| --- | --- |
| B. | Mucosa |

|  |  |
| --- | --- |
| C. | Anus |
| 14. | The place where digested molecules of food, water and minerals are absorbed. |

|  |  |
| --- | --- |
| A. | Small intestine |

|  |  |
| --- | --- |
| B. | Large intesine |

|  |  |
| --- | --- |
| C. | Mouth |

|  |  |
| --- | --- |
| 15. | This is the job of the digestive system. |

|  |  |
| --- | --- |
| A. | To give the body shape |

|  |  |
| --- | --- |
| B. | To take in and break down food for use by the body |

|  |  |
| --- | --- |
| C. | To take in oxygen and give off carbon dioxide |

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| --- | --- |
| 16. | The opening at the end of the digestive tract in which solid wastes are eliminated. |

|  |  |
| --- | --- |
| A. | Anus |

|  |  |
| --- | --- |
| B. | Mucosa |

|  |  |
| --- | --- |
| C. | Liver |

|  |  |
| --- | --- |
| 17. | Composed of the teeth, tongue, salivary glands and muscles, this part takes in food to begin the process of digestion. |

|  |  |
| --- | --- |
| A. | Anus |

|  |  |
| --- | --- |
| B. | Esophagus |

|  |  |
| --- | --- |
| C. | Mouth |

**18. Digestion begins in the mouth. Which of the following statement is INCORRECT?**

A. The tongue aids in the digestion of the food.

B. The saliva changes some of the starches in the food to sugar.

C. The tongue keeps the food in place in the mouth while the food is being chewed

D. the digestive juices can react more easily with the food when chewed.

**19. Where is the digestive enzyme amylase found?**

A. Stomach

B. Mouth

C. Chest

D. Brain

**20.The protease specifically breaks down proteins into**

A. amino acids

B. hydrochloric acids

C. a & b

D. none of the above