

## BIO 130 (General Biology)

### Worksheet 2: The Origin of Life (CH. 19) (Total Points: 100)

Name: \_\_\_\_\_Ayanna Bell \_\_\_\_\_

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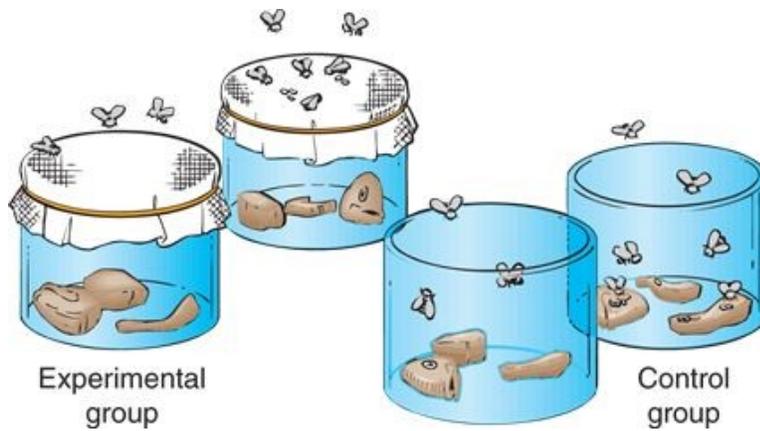
1. A. State the concept of spontaneous generation. (5 pts)  
**Life originated from nonlife**
2. B. Who proposed this concept? (5 pts)  
**Aristotle**
3. A. State the concept of Panspermia. (5pts)  
**That life arose outside of earth. Living things were transported to Earth to populate the earth**
4. B. Who proposed this concept? (5pts)  
**Svante Arrhenius**
5. Describe the concept of biogenesis. (10pts)  
**Life originates from preexisting life. Living things were transported to Earth to populate the earth**
6. Describe briefly the chemical evolution of life on earth. (10pts)  
**Random combinations of of inorganic compounds, under the influence of strong ultraviolet light from the sun, resulted in the formation of extremely complex organic (carbon containing) compounds, which are the basis of life.**

### **Evaluate & draw Conclusion:**

**Study** Redi's Experiment and answer the following questions that follow.

#### **Redi's Experiment**

In 1668, Francesco Redi, an Italian physician, performed an experiment that challenged the concept of spontaneous generation. He set up a controlled experiment to test the hypothesis that maggots arose spontaneously from rotting meat (figure 19.1). He used two sets of jars that were identical except for one aspect. Both sets of jars contained decaying meat, and both were exposed to the atmosphere. However, one set of jars was covered by gauze while the other was uncovered. Redi observed that flies settled on the meat in the open jars, but the gauze blocked their access to the meat in the covered jars. He found that maggots appeared on the meat in the uncovered jars but not on the meat in the covered ones.



### Questions from Redi's experiment

1. What hypothesis was Redi testing? (State the hypothesis in question form) (10pts)  
**maggots arose spontaneously from rotting meat**
2. Were both groups (experimental & control) exposed to air? (10pts)  
**yes**
3. What was the variable? (10pts)  
**Covered jar**
4. Where did the maggots come from in the control group? (10pts)  
**Uncovered jar**
5. Did Redi's experiment support spontaneous generation? (10pts)  
**Yes**
6. Which concept did this experiment support? (10pts)  
**Spontaneous generation**