

For the Final Exam, I will choose FIVE of the following questions. You must answer any **THREE**. If the question is based on one of the student presentations, you may NOT answer that question. **Your answers should be 500 ~ 1,000 words, limited to 2 ~3 Word or PDF pages.** Essays will be graded on the assumption that you have written out answers to *all* of the questions ahead of time. Use of external reference materials is strongly encouraged.

- 1) Science students are taught that science is independent of politics. Is this true? Was the success of **Lysenkoism** in the Soviet Union attributable to the nature of the Soviet system in contrast to that of Western countries? Does Western science support the capitalist system? Compare and contrast the arguments for and against.
- 2)
- 3)
- 4) The **Germ Theory of Disease** develops quite late, and requires a fair amount of time to be fully accepted by the medical community. Offer and defend a theory as to why this is so. Do the **films about Pasteur and Ehrlich** offer insights?
- 5)
- 6) Compare and contrast the theories of **Vitalism & Reductionism** as theories of the development of living beings. How does the original distinction between Organic and Inorganic chemistry related to this?
- 7) Redi and Pasteur conducted historical experiments to disprove **Spontaneous Generation**. Summarize the experiments, noting in particular the Control experiments in each. What objections can be raised to these “*proofs*”?
- 9) Are **Nobel prizes** awarded for a single major discovery, and (or) for a body of work over time? Give examples of each from material presented in the course. Does this change perspectives on perceived “*injustice*” in some awards (or lack thereof)?