Introduction to Ethics, Dual-use Research and Equipment of Concern Exam (Total – 20 pts)

Answer Sheet

1. What two practices has been effective in promoting bioethics?
   a. Regulation and laws
   b. Regulations and codes of conduct
   c. Code of ethics and conduct
   d. Code of conduct and standards

2. Match the definitions to the words (3 pts):

| ______ | DURC | a. Materials and technologies that can be used for both civil and military purpose. |
| ______ | Bioethics | b. Research that, based on current understanding, can be reasonably anticipated to provide knowledge, products or technologies that could be directly misapplied by others to pose a threat to public health and safety, agricultural crops and other plants, animals, the environment, or material |
| ______ | Dual use | c. The promotion of responsible and good research practices |

3. The goal of professional codes of conduct is:
   a. Aspirational
   b. Educational/advisory
   c. Enforceable

4. Give an example of DURC: _____________________________________

5. Give three examples of potential dual-use equipment at a vaccine manufacturing plant (3 pts):
   ___________________________________________________________

6. T or F Each individual is responsible for their own behavior and has a responsibility to report or formally address ethical violations to management.

7. T or F The institution is not responsible for ensuring proper oversight and training to manage dual-use research of concern.

8. T or F The institution is required to address any ethical dilemmas brought to its attention by one of its researchers in a discrete and timely manner.
9. **T or F** National Science Advisory Board for Biosecurity proposed a framework for the Oversight of dual-use life sciences research.

10. **T or F** Ethical conduct does not apply to personal integrity or their institution.

11. DURC stands for __________________________________________________________.

12. __________ is an international treaty that went into effect in 1975. It bans the use of biological weapons and prohibits all development, production, acquisition, stockpiling or transfer of such weapons.
   b. Biological and Toxin Weapons Convention (BWTC)

13. What lowers the risk when working with large scale production?
   a. High pressure
   b. Large volume of live virus
   c. Automatic transfers
   d. Vaccine is available

14. Give one example for misuse of biological agents: ________________________________

15. The only difference between a vaccine and a biological weapon is the ________________
    and the _________________. (2pts)