BiS200 Quiz#4 (2024-05-27) (Answer in English, Closed book, 15 minutes)

Fill-in-the-blank questions:

1. Unlike traditional vaccines, which primarily stimulate antibody production, cancer vaccines often involve introducing antigens associated with cancer cells to activate ( ) directly.
2. Pharmacodynamics (PD) is concerned with the effects of a drug on the body (e.g. Dose–response relationships, Mode-of-Action). On the other hand, ( )is concerned with the effect of the body on the drug (e.g. Absorption, Distribution, Metabolism, Excretion)
3. In modern biomaterials, there are two common modes of failure. First, materials that contact blood can fail due to ( ). Second, materials for non-blood-contact can fail due to ( ).
4. When a ( ) is placed under pressure, it generates an electric charge, serving as a good mechanical sensor.

Short-answer questions:

1. What is PLGA and how does it benefit drug delivery systems?
2. What are the three majors components of tissue engineering?
3. What are the key differences between accuracy and precision in the context of biosensors?
4. What is a low-pass filter and how is it useful in EEG or ECG signal processing?