

國立嘉義大學九十三年學年度 生物藥學研究所碩士班招生考試試題

科目：細胞生物學

一、問答題：(每題 20 分，共 80 分)

1. Please select 4 of the following items and then describe their principle and application.
 - (1) ELISA
 - (2) EMSA
 - (3) Northern-blot
 - (4) Western-blot
 - (5) Agarose gel electrophoresis
 - (6) HPLC
 - (7) Plasmid transformation
 - (8) DNA cloning (DNA manipulation)
 - (9) Proteomics
 - (10) Microarray
2. Please describe three types of membrane transport in eukaryotes.
3. Most signal molecules bind to specific receptor proteins on the surface of the target cells that they influence. The receptors convert an extracellular ligand-binding event into intracellular signals. Please describe three classes of most mammalian cell-surface receptor proteins.
4. Please explain the signaling pathway in a cell.

二、簡答題：(每題 4 分，共 20 分)

Please describe the following in brief：

1. Mitosis
2. Signal transduction
3. Gene mutations
4. Recombinant DNA
5. DNA library