

考 試 科 目	細胞與分子生物學	所 別	8151 神經科學研究所	考 試 時 間	2 月 26 日(日) 第三節
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Define the following terms (5 points each)

1. Gap junction
2. Heterochromatin
3. Pseudogene
4. Reverse transcriptase
5. Spliceosome
6. TATA box
7. Telomere
8. siRNA
9. Restriction enzyme
10. Phagocytosis

Questions

11. What are the major protein-sorting pathways in eukaryotes? (10 points)
12. Please describe how insulin is secreted from pancreatic- β cells in response to a rise in blood glucose. (10 points)
13. If you are a student in the Institute of Neuroscience at National Chengchi University and your research project requires BDNF to be over-expressed in neurons.
 - (a) Please describe how you would carry out the research project step by step. (10 points)
 - (b) You may need to do polymerase chain reactions and DNA sequencing. Please describe these two techniques in detail. (20 points)

