

一、解釋名詞 (每題 3 分, 共 60 分)

1. adaptive radiation
2. chemoautotroph
3. gastrulation
4. biome
5. complementary DNA
6. cellular respiration
7. cyanobacteria
8. Echinodermata
9. primary production
10. hermaphroditism
11. hydrostatic skeleton
12. pseudocoelom
13. osmoregulation
14. synapsis
15. transcription factor
16. metamorphosis
17. homeotic gene
18. phytoplankton
19. endemic species
20. founder effect



二、問答題: (每題 8 分, 共 40 分)

1. What three major characteristics are shared by prokaryotic and eukaryotic cells?
2. Briefly describe how three different processes that occur during the sexual life cycle increase the genetic diversity of offspring.
3. Compare a seed plant with an alga in terms of adaptations for life on land versus life in the water.
4. Name two phyla of animals that are radially symmetrical and two that are bilaterally symmetrical. How do the overall lifecycles of radial and bilateral animals differ?
5. Compare exponential and logistic population growth. Under what conditions might each occur? What might limit growth?