※ 請於答案卷上依序作答，並標明題號。

1. Based on the structure of cells, all living organisms on earth could be divided into two groups. What are these two groups? (4 分)
2. Most of biological molecules are macromolecules (called polymers). These polymers consist of many similar or identical small units (called monomers). What type of reaction links monomers together to form polymers, and what type of reaction breaks down polymers to monomers? (4 分)
3. List five organelles that are included in the endomembrane system. (5 分)
4. Compare C_3 plants, C_4 plants and CAM plants in timing and location of carbon fixation during photosynthesis. (8 分)
5. Define and describe the relationship between centromeres, kinetochores, and spindle microtubules in mitosis. (5 分)
6. Distinguish between incomplete dominance and codominance. (5 分)
7. What's the function of the telomerase? (5 分)
8. If the coding strand of a gene contains a sequence of 5'ATCGCT3', what is the corresponding sequence in the mRNA molecule from 5' to 3'? (5 分)
9. What's the cause of apical dominance? (5 分)
10. The secondary growth in woody plants is due to cell divisions at two sites of meristem cells, what are they? (4 分)
11. Using mammalian small intestine as an example to illustrate that an organ is made up of different types of tissues that together perform distinct functions. (10 分)
12. How does the nervous system distinguish between stimuli of different types? How does the nervous system code information about stimulus intensity? (8 分)
13. Explain the following terms (每小題 4 分)
    a) acquired immunity
    b) synapomorphy
    c) K-selected population
    d) animals
    e) renin
    f) primary induction (in embryonic development)
    g) excitation-contraction coupling (of skeletal muscle)
    h) luteinizing hormone