

※ 考生請注意：本試題不可使用計算機。 請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

1. Please use the following terms to illustrate the road-map of endocytic and biosynthetic-secretory pathways inside cells. (a) Endoplasmic reticulum, (b) Golgi, (c) Early endosome, (d) Late endosome, (e) Lysosome, (f) Secretory vesicles and (g) Cell exterior (20%)
2. Please describe the "cell cycle". What is "interphase"? How to determine the stage of cell cycles. (20%)
3. What is "post translational modifications"? What are functions of post translational modifications? (20%)
4. How to pack DNAs to chromosomes? What are results if DNAs are packed tightly? (20%)
5. How to prove that the DNA replication is semiconservative? (20%)