

# 浙江大学 2021 - 2022 学年秋冬学期

## 《生命科学基础》课程期末考试试卷

课程号: (2021-2022-1)-72120370-0007063-1, 开课学院: 基础医学系

考试试卷: A 卷 √、B 卷 (请在选定项上打 √)

考试形式: 闭 √、开卷 (请在选定项上打 √), 允许带 考试用品 入场

考试日期: 2022 年 01 月 12 日, 考试时间: 120 分钟

诚信考试, 沉着应考, 杜绝违纪。

考生姓名: \_\_\_\_\_ 学号: \_\_\_\_\_ 所属院系: \_\_\_\_\_

题序	1	2	3	4	5	6	7	8	9	10	总 分
得分											
评卷人											

### 一. 多项选择题 (每题 5 分, 总分/共 25 分)

答题时请从每题的多个备选答案中选择合适的作为正确答案, 可以选择多个选项, 并在答卷上相应题号后的括号内填写选项的相应字母。

- 下面哪一个不是 DNA 的成分: ( )
  - 腺嘌呤
  - 胞嘧啶
  - 尿嘧啶
  - 鸟嘌呤
- 下列关于细菌的叙述正确的是: ( )
  - 所有的细菌在生态系统中都是分解者
  - 细菌细胞不同于洋葱细胞的主要结构特点是没有成形的细胞核
  - 细菌依靠芽孢进行繁殖
  - 将食品放在冰箱中可防止腐败变质的原因是低温杀死了细菌等微生物
- 人类 B 细胞分化成熟的场所是: ( )
  - 胸腺
  - 骨髓
  - 淋巴结
  - 脾脏

4. 以下哪一类证据更倾向支持现代中国人的独立起源假说: ( )
- A. 铲形门齿
  - B. 甲骨文
  - C. 种植水稻
  - D. Y 染色体变异
5. The specialized function shared by the cells that line the lungs and those that line the lumen of the gut is that both types of cells: ( )
- A. receive their oxygen directly from inhaled air and ingested foods.
  - B. provide abundant exchange surface.
  - C. have exceptionally high numbers of cellular organelles in the cytoplasm.
  - D. offer greater protection due to increased membrane thickness.
  - E. have a lowered basal metabolic rate due to cooperative exchange between cells.

## 二. 简答题 (每题 15 分, 总分/共 60 分)

1. Please describe the process of gene expression control.
2. Why Mimivirus (size 400 nm; 1000 genes) and Pandoravirus (size 700 nm; 2556 genes) still are viruses?
3. What are the common and different properties between normal stem cells and cancer stem cells? How can we treat cancer based on these properties?
4. Briefly describe the main arguments on the fossil and genetic origins of modern man.

## 三. 论述题 (总分/共 15 分)

1. Talk about the significance of human civilization and technological innovation from the perspective of human evolution and disease, you can give an example to illustrate.