

國立中山大學 97 學年度碩士班招生考試試題

科目：生物學【生科系碩士在職專班】

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1. What are the three components of cytoskeleton? What are their structures and functions? (10 pts)
2. Define osmosis. Describe verbally and with drawings what happens to a plant cell when placed in isotonic, hypotonic and hypertonic solutions. (10 pts)
3. What is apoptosis, and what are its functions? (10 pts)
4. Name and state the function of the three components of operons. (10 pts)
5. What are the essential features of the process of natural selection as proposed by Darwin? (10 pts)
6. Which characteristics best define fungi? Describe the body of a fungus and how fungi reproduce. (10 pts)
7. Discuss different types of allergic response as they relate to the immune system. (10 pts)
8. What is the carrying capacity of an area? (10 pts)
9. Of what benefit is the ozone shield? What pollutant in particular is associated with ozone shield depletion, and what are the consequences of this depletion? (10 pts)
10. List and discuss five major types of pollutions that particularly affect biodiversity. Of these, why is global warming considered the most significant? (10 pts)