國立臺灣大學99學年度碩士班招生考試試題

科目:物理海洋學(B)

題號: 233

問答題: (共10題,每題10分)

- 1. Draw a deep water ocean wave and label its parts. Show the orbits of water particles. Include a definition of wave period. How would you measure wave frequency?
- 2. What forces are responsible for the movement of ocean water in currents? What forces and factors influence the direction and nature of ocean currents?
- 3. What factors affect the density of water? Why does cold air or water tend to sink? What is the role of salinity in water density?
- 4. Why does water tend to flow around the periphery of an ocean basin? Why are western boundary currents the fastest ocean currents? How do they differ from eastern boundary currents?
- 5. What is El Niño? How does an El Niño situation differ from normal current flow? What are the usual circumstances?
- 6. What methods are used to study ocean currents?
- 7. What happens when a wind wave breaks? What factors affect the break? How are plunging waves different from spilling waves?
- 8. How is an ocean wave different from a wave in a spring or rope? How is it similar? How does it relate to a "stadium wave"-a waveform made by sports fans in a circular arena?
- 9. What is a high tide and a low tide? A spring tide and a neap tide?
- 10. What causes tsunami? Are all seismic sea waves tsunami? Are all tsunami seismic sea waves? How fast do tsunami travel? Do they move in the same way or at the same speed in a confining bay as they would in the open ocean?

試題隨卷繳回