

國立中山大學九十三年學年度博士班招生考試試題

科目：海洋生物學【海生所選考】

共一頁第一頁

I. Explain eight of the following terms (5 points each):

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| a. nekton | b. holdfast |
| c. abyssal gigantism | d. luciferin |
| e. chitin | f. El Nino |
| g. deep scattering layer | h. osmoconformer |
| i. Red tide | j. zooxanthellae |
| k. epifauna | l. euryhaline |

II. Answer the following questions (10 points each):

1. Give a diagram to help you to describe the nitrogen cycle in the sea.
2. Discuss the causes and ecological importance of the plankton occurring in patches.
3. Compare atolls, barrier reef, and fringing reef.
4. Summarize the reproductive, developmental, physiological and ecological characteristics of deep-sea animals.
5. What is primary production? How does one go about measuring it? How do gross, net, and total primary productions differ?
6. Explore the arguments that attempt to explain the high species diversity of coral reef fish.