

海洋生物学 1/1

(解答は英語・日本語のどちらでもよい (英語/ラテン語と指示してある場合以外)。文法などの間違いは採点に影響しない)

[1] Choose one of the following topics and discuss. (20 points)

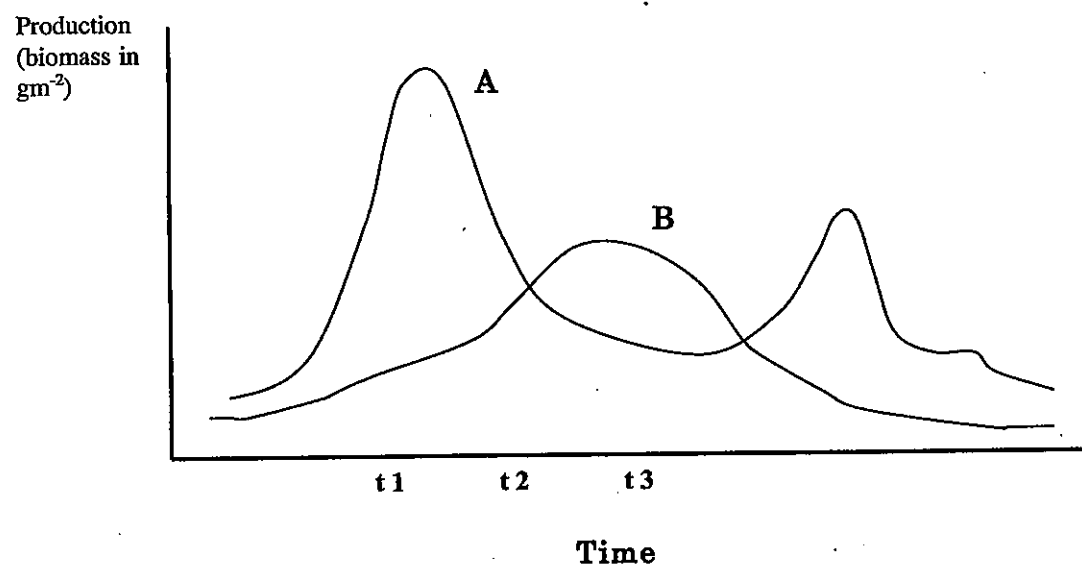
- (1) Food webs in kelp forests
- (2) Thermal stratification and its effects in lakes and inner bays
- (3) Ecophysiological adaptation of deep-sea benthos
- (4) Global distribution of salt marshes and mangroves
- (5) Linkage between benthic and planktonic life
- (6) Migration of marine organisms

[2]

- (1) Estuarine animals are known to demonstrate various feeding modes. Describe two different cases with examples. (10 points)
- (2) Discuss how different ecological factors affect infaunal and epifaunal organisms in soft-bottom environments. (15 points)

[3] The diagram below shows a typical example of the seasonal dynamics of planktonic production in temperate coastal waters.

- (1) A and B are either zooplankton or phytoplankton – which is which and why? (5 points)
- (2) Which zooplankton group is most abundant in the sea? Answer in English or Latin. (5 points)
- (3) Which of the three labels (t1, t2 or t3) represents summer? Give the reason(s). (10 points)
- (4) Discuss the factors that determine the occurrence of peaks in curve A. (10 points)



[4] Two barnacle species, species A and B, form distinct horizontal zones on a rocky shore with species A being positioned above species B. In order to clarify the mechanisms that generate this distribution pattern, devise and explain an experiment, paying particular attention to (a) the hypothesis you propose to test with the experiment, (b) possible results and their interpretations. (25 points)