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科目：水產資源學
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一、解釋名詞（每題 2.5 分，共 25 分）

1. Bycatch
2. Recruitment
3. Spawning biomass-per-recruit
4. Recruitment overfishing
5. Maximum sustainable yield
6. IUU fishing
7. Carrying capacity
8. Overfishing and overfished
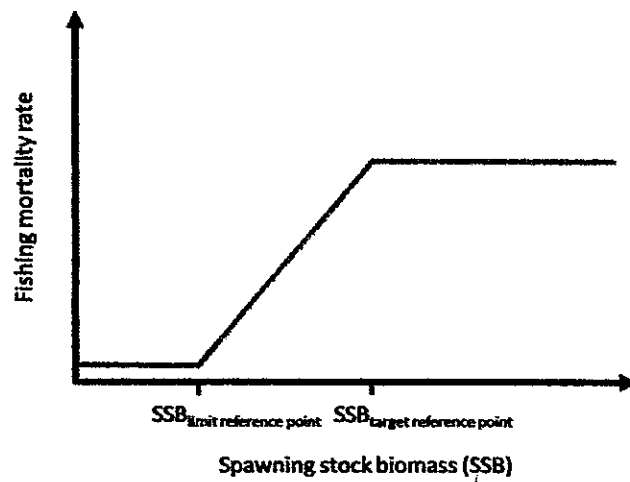9. Depensation
10. Size-at-50%-maturity

二、問答題（共 75 分）

1. The concept of the "stock" is fundamental to fisheries management. Please explain the definition of a fish stock (10 分). Please describe the most commonly used methods for stock determination (15 分).

2. In the fishery surplus production models, various production functions are present. According to the figure below, please identify which curves correspond to the Schaefer model and which one corresponds to the Fox model (5 分). Please describe the biological assumption differences between the Schaefer and Fox surplus production models (20 分).

見背面

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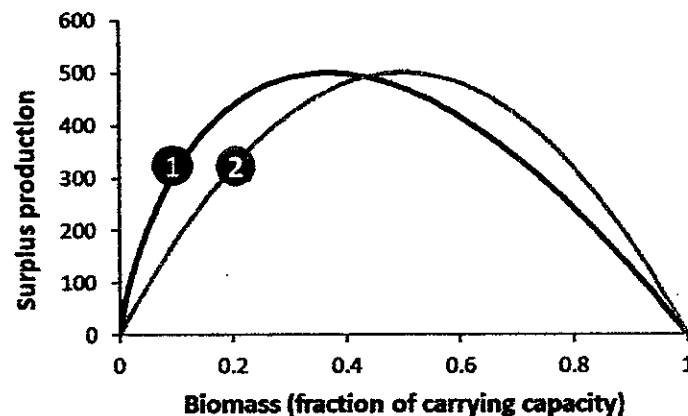
3. Based on the below figure, please explain the meanings of Target Reference Point ($SSB_{target\ reference\ point}$), Limit Reference Point ($SSB_{limit\ reference\ point}$), and Harvest Control Rule (HCR) (15 分). Please describe the distinctions between Empirical HCR and Model-Based HCR (10 分).

試題隨卷繳回