

UNIVERSITY OF OSLO

Faculty of Mathematics and Natural Sciences

Exam in	BIO 4350 Marine Mammals
Day of exam:	June 14th 2013
Exam hours:	0900 - 1200
This examination paper consists of 1 page(s).	
Appendices:	None
Permitted materials:	None

Make sure that your copy of this examination paper is complete before answering.

1. Describe the biology of sperm whales (special anatomical characteristics, life history, ecology, behaviour, sound production).
2. Describe the adaptation in whales for hearing under water.
3. Describe the adaptation to diving in seals and comment on how whales mainly differ from seals.
4. Describe the swimming cycle and its underlying hydrodynamical reasons in dolphins. What are the most important anatomical adaptations to swimming?
5. How is Cetacea placed within Artiodactyla on the basis of genetics?
6. What is the alternative to the hypothesis that the first adaptation to an aquatic life was modification of the hearing system?
7. Why can a marine mammal population sustain an annual harvest of 3% of the total population size?