

# UNIVERSITY OF OSLO

## Faculty of Mathematics and Natural Sciences

<b>Exam in</b>	<b>BIO4350</b>
<b>Day of exam:</b>	<b>13 June 2014</b>
<b>Exam hours:</b>	<b>3h</b>
<b>This examination paper consists of</b>	<b>1...page(s).</b>
<b>Appendices:</b>	<b>None</b>
<b>Permitted materials:</b>	<b>None</b>

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

### **Question 1 (20 points)**

What do you know about minke whales ?

### **Question 2 (20 points)**

What do you know about harp seals ?

### **Question 3 (20 points)**

The kidneys. Why is the sea a desert for terrestrial mammals? What is the salinity in fish and crustaceans? What is the main adaptation of the kidneys in whales? How do marine mammals get fresh water?

### **Question 4 (20 points)**

Describe the hearing system in whales (describe the physical properties of sound, and the anatomical and physiological adaptations).

### **Question 5 (20 points)**

What are the two competing theories of evolutionary pressure leading to whales?  
Which species in the evolutionary line of cetacea was the first truly pelagic species, and how can we know that?  
What is the geographical distribution of ringed seals?  
What do killer whales eat?  
What do humpback whales eat?