Department of Biology

**Examination paper for TBI4110 Ecotoxicology and Environmental Resources**

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**Permitted examination support material: No material permitted**

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Date Signature

English

1. What is meant by the term "trophic level" in ecology.

2. Explain the difference between bioavailability, bioconcentration, bioaccumulation and biomagnification of pollutants. Give some examples of various toxic compounds that are proven to biomagnify.

3. Explain why females of mammals and birds often have lower concentrations of POPs than the males have.

4. Explain what you think could be the reason that both sexes of killer whales in South Europe have roughly equal concentrations of exposure to PCBs.

5. Explain the difference between essential and non-essential elements, and explain any differences in toxic dose-effect responses between essential and non-essential elements. Give some examples of non-essential elements that are toxic.

6. Explain how pollutants are transported through air and the various processes involved in this transport. Give some examples of contaminants that are transported through air over long distances, and explain how this happens.

7. Discuss different mechanisms of how pollutants can affect reproduction. Give some examples.

8. Describe xenobiotic biotransformation processes.

9. Explain what is meant by the term “biomarker "and explain how biomarkers can be classified.

10. Several pollutants are internationally banned under the Stockholm Convention on POPs. What properties are important for the pollutants entered on the list of banned POPs. Give some examples of pollutants that are on this list.

Each task counts equally in the evaluation.