北海道大学大学院環境科学院環境起学専攻

**Division of Environmental Science Development**
**Graduate School of Environmental Science, Hokkaido University**

# 令和 9 年度大学院修士課程入学試験問題（秋季入試）

# 令和 8 年度 10 月入学大学院修士課程入学試験問題

# Entrance Examination

# 専門科目　出題意図

# Specialized Subjects Intent of the Questions

# Environmental Science

## Question 1

(1) Testing basic knowledge of population and food.
(2) Testing basic knowledge of population and food.
(3) Testing basic knowledge of population and food.
(4) Testing knowledge that organically connects the relationships among multiple environmental issues.
(5) Testing the fundamental knowledge of nutrients.
(6) Testing the fundamental knowledge of GM crops and its impacts on the environment.

## Question 2

(1) Testing basic knowledge of natural selection and evolution.
(2) Testing basic knowledge of the types of sources of water pollution.
(3) Testing basic knowledge of greenhouse gases.
(4) Testing basic knowledge of environmental pollutants.
(5) Testing basic knowledge of trends in renewable energy generation and key considerations regarding its use.
(6) Testing basic knowledge of international agreements that contribute to addressing environmental issues.
(7) Testing basic knowledge of microbes in ecosystems.
(8) Testing basic knowledge of the mechanisms by which species coexist within ecosystems.

# Physics

**Question 3**

(1) Testing the basic knowledge in the specialty.
(2) Testing the fundamental knowledge and quantitative skills in radiant energy.
(3) Testing the fundamental knowledge in global circulations of air and water.

# Ecology and Geography

## Question 4

(1) Testing basic knowledge of fluvial and volcanic landform terminology.
(2)
(a) Testing understanding of the relationship between terrace elevation and the timing of emergence.
(b) Testing understanding of the roles of crustal movement and glacial–interglacial sea-level change in terrace formation.
(c) Testing understanding of the process by which periglacial action smooths slopes.
(d) Testing applied understanding of the relationship between geological/soil conditions and vegetation distribution.
(e) Testing understanding of the difference in managing authority between national and quasi-national parks, and its advantages.
(f) Testing reasoning ability regarding the socioeconomic rationale for differential pricing between residents and non-residents.

## Question 5

(1) Testing basic knowledge of ecology
(2) Testing basic knowledge of biological responses to global warming
(3) Testing basic knowledge of invasive species management

# Chemistry

**Question 6**

(1) Testing the basic knowledge in atoms and elements.
(2) Testing the basic knowledge in chemical bonding and reaction kinetics.
(3) Testing the basic knowledge in organic chemistry.