

Enrollment in October 2021  
Graduate School of Environmental and Life  
Science, Okayama University Master's Course  
For International Students  
Entrance Examination Question Booklet  
(2021.8)

## Specialized Subject

Division of Social Engineering and Environmental Management  
Department of Rural Environment Management

### Notes

1. Do not open this booklet until the start of the examination is announced.
2. You are given one booklet and three answer sheets and two draft sheets.
3. Write your examinee number in the designated box on the top of each answer sheet.
4. Answers should be written in the space designated on the answer sheet for each question.
5. Answer all three questions of this booklet.
6. At the end of the examination, submit all answer sheets as instructed by the invigilator.
7. Take this booklet and draft sheets with you after the examination.



The question starts on the next page.

## Question 1

After reading the paragraphs below, answer the following three questions.

Source: Floor Brouwer and C. Martijn van der Heide (*eds.*). 2009, *Multifunctional Rural Land Management*, Earthscan.

- (1) Regarding to the underlined sentence (a), what would be the “various reasons”?
  
- (2) The underlined phrase (b) can be captured neatly by the term ‘multifunctionality’. Raise examples of rural multifunctionality as many as you can.
  
- (3) Contrary to the underlined sentence (c), “shrinking of the agricultural sector” could result in “changing social preferences” in some developed countries including Japan. Explain these situations in relation to domestic migration patterns.

## Question 2

Answer the following two questions referring the figures.

Figure 1 shows the changes in the acreage and rate of abandoned arable land for all over Japan and the mountainous regions in Japan. Acreage of arable land in mountainous regions accounts for about 40% of the total arable land in Japan.

Source: Sho Shiozawa, Eiji Yamaji and Shuichiro Yoshida (eds.). 2016, *Agricultural land environmental engineering*, Buneido publishing.

(1) Describe the characteristics of the abandoned arable land in Japan by referring Figure 1. Then discuss the causes of abandonment in cultivation in mountainous region.

Figure 2 compares the nitrogen cycle in Japan between 1960 and 1992. Roman-typed numbers show the nitrogen amounts in 1960 while Gothic-underlined numbers show those in 1992.

Source: Teruo Matsunaka (eds.). 2003, *Fundamental Soil Science*, Nobunkyo publishing.

(2) Referring Figure 2, compare the nitrogen amounts of imported food feed and domestic production food feed between 1960 and 1992. Then discuss what you can read from the figure.

### Question 3

Describe the social background, importance, and necessities of your research plan during the master's course.