

# Doctoral Program of Veterinary Science

獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 1 / 8

令和8年度4月入学（第2回）

## Question 1

Read the passage below and answer the questions.

(著作権の関係上、公開できません)

[Source: Fertilization, Veterinary Embryology, 2017]

(Notes for glosses)

- \*1 oocyte: a developing female gamete before it matures and is released from follicle in ovary
- \*2 spermatozoon: a motile male gamete of an animal
- \*3 cumulus cell: multilayer of cells that surround a freshly ovulated oocyte
- \*4 zona pellucida: the envelopes surrounding the mammalian oocyte
- \*5 acrosomal membrane: a thin-walled vesicle that forms a cap on the head of a spermatozoon
- \*6 vitelline membrane: a membrane that surrounds the oocyte of animals

# Doctoral Program of Veterinary Science

## 獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 2 / 8

令和8年度4月入学(第2回)

Question 1-1.

Choose the most appropriate word from the four choices for each blank. Write the corresponding letter (a–d) on your answer sheet.

- |            |            |         |         |
|------------|------------|---------|---------|
| (1) a. in  | b. through | c. by   | d. from |
| (2) a. off | b. up      | c. down | d. in   |
| (3) a. in  | b. of      | c. from | d. for  |
| (4) a. of  | b. from    | c. in   | d. to   |
| (5) a. to  | b. in      | c. by   | d. off  |

Question 1-2.

Briefly explain the events that trigger the acrosome reaction in spermatozoon.

Question 1-3.

Briefly explain the role of the acrosome reaction in the process of fertilization.

Question 1-4.

Choose all of the following statements that are incorrect

- ① Spermatozoon penetrate the cumulus cell layer by their own motility and by enzymatic breakdown of cumulus cell bonds.
- ② The microvilli of the oocyte vitelline membrane contact the exposed inner acrosomal membrane at the tip of the sperm head.
- ③ Nonnuclear spermatozoan elements do not play a key role in the final stages of fertilization.
- ④ The fertilization process to enter the spermatozoon into oocyte involves first passing through the cumulus cell layer, then fusing with the oocyte cell membrane, and finally penetrating the zona pellucida.

# Doctoral Program of Veterinary Science

獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 3 / 8

令和8年度4月入学（第2回）

## Question 2

Read the passage below and answer the questions.

(著作権の関係上、公開できません)

[Source: African swine fever (infection with African swine fever virus) OIE Terrestrial Manual (2019) (with partial modification)]

# Doctoral Program of Veterinary Science

## 獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 4 / 8

令和8年度4月入学（第2回）

### Question 2-1

Choose the most appropriate word from the four choices for each blank (1) – (10).

- |      |               |              |               |                |
|------|---------------|--------------|---------------|----------------|
| (1)  | a. envelope   | b. enveloped | c. enveloping | d. envelopes   |
| (2)  | a. comprises  | b. comprise  | c. comprised  | d. comprising  |
| (3)  | a. cause      | b. reflect   | c. convert    | d. contribute  |
| (4)  | a. sequencing | b. sequenced | c. sequences  | d. sequence    |
| (5)  | a. structure  | b. symptom   | c. sample     | d. serotype    |
| (6)  | a. observe    | b. observed  | c. observing  | d. observation |
| (7)  | a. resist     | b. resisting | c. resistant  | d. resistance  |
| (8)  | a. accidental | b. random    | c. fatal      | d. reservoir   |
| (9)  | a. recovery   | b. infection | c. fatality   | d. admission   |
| (10) | a. lesions    | b. lesioned  | c. lesioning  | d. lesion      |

### Question 2-2

Write the word that matches each of the following definitions. The word can be found in the passage on the previous page.

- (1) A type of white blood cells that engulfs pathogens, and serves as the main target of ASFV in pigs.
- (2) A word describing infections that do not show any visible clinical signs.
- (3) A word describing the structural appearance of ASFV, with 20 identical triangular faces.
- (4) A clinical sign characterized by decreased activity, dullness, and reduced responsiveness to surroundings.
- (5) A term referring to the development of detectable specific antibodies in the blood as a result of infection or immunization.

# Doctoral Program of Veterinary Science

獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 5 / 8

令和8年度4月入学（第2回）

## Question 3

Read the passage below and answer the questions

(著作権の関係上、公開できません)

# Doctoral Program of Veterinary Science

## 獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 6 / 8

令和8年度4月入学（第2回）

### Question 3-1

Choose the most appropriate word from the four choices.

- (1) a. on            b. to            c. of            d. in
- (2) a. till           b. to            c. on            d. at
- (3) a. to            b. and           c. of            d. in
- (4) a. not           b. hardly       c. usually       d. always
- (5) a. as            b. in            c. to            d. for
- (6) a. resistant    b. resistance   c. resist        d. residence
- (7) a. on            b. into          c. off            d. for

### Question 3-2

In what types of environments can *Salmonella* survive for several weeks?

### Questions 3-3

Which of the following serotypes cause disease in humans? Circle the correct answer(s).

- a) *Salmonella enterica* serotype Dublin
- b) *Salmonella enterica* serotype Choleraesuis
- c) *Salmonella enterica* serotype Enteritidis

### Question 3-4

In which cases is treatment with antimicrobial agents not appropriate?

# Doctoral Program of Veterinary Science

獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 7 / 8

令和8年度4月入学（第2回）

Question 4

Read the passage below and answer the question.

(著作権の関係上、公開できません)

[Source: J M Dobson, Journal of Small Animal Practice, 2019]

# Doctoral Program of Veterinary Science

## 獣医学専攻

帯広畜産大学大学院畜産学研究科

科目名：英 語

博士課程

English 8 / 8

令和 8 年度 4 月入学 (第 2 回)

### Question 4-1

Choose the most appropriate word or phrase from the four choices for each blank. Write the corresponding letter (a–d) on your answer sheet.

- |                   |                |                   |                  |
|-------------------|----------------|-------------------|------------------|
| (1) a. to         | b. by          | c. for            | d. in            |
| (2) a. sensitive  | b. sensible    | c. sensitivity    | d. sensation     |
| (3) a. finally    | b. especially  | c. lately         | d. nearly        |
| (4) a. relied on  | b. trusted     | c. depended       | d. counted       |
| (5) a. access     | b. accessibly  | c. accessible     | d. accessibility |
| (6) a. Compared   | b. As opposed  | c. In contrast to | d. Rather than   |
| (7) a. because    | b. due to      | c. although       | d. despite       |
| (8) a. although   | b. in spite of | c. because of     | d. even though   |
| (9) a. commonly   | b. rarely      | c. hardly         | d. frequently    |
| (10) a. holds     | b. brings      | c. carries        | d. keeps         |
| (11) a. exclusion | b. alternative | c. differential   | d. possibility   |

### Question 4-2

Which of the following imaging modalities is most appropriate for diagnosing intracranial tumors?

1. radiography
2. ultrasound
3. CT
4. MRI