

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 / 6

令和5年度10月入学

令和6年度4月入学（第1回）

Question 1

Read the passage below and answer the following questions.

著作権の関係上，公開できません。

[Source: <https://www.eufic.org/en/food-production/article/lab-grown-meat-how-it-is-made-and-what-are-the-pros-and-cons> (Partial modification)]

Question 1-1.

Choose the most appropriate words from the four choices for blank (1) – (6). Write the corresponding letter (a - d) on your answer sheet.

- | | | | | |
|-----|------------------|----------------------|-------------------|----------------|
| (1) | a. where | b. which | c. when | d. whose |
| (2) | a. by | b. of | c. for | d. to |
| (3) | a. on | b. at | c. in | d. with |
| (4) | a. As a result | b. In addition | c. For the reason | d. In general |
| (5) | a. differentiate | b. duplicate | c. retrograde | d. diffuse |
| (6) | a. alternatively | b. on the other hand | c. however | d. for example |

Question 1-2.

Rearrange the following words to complete the sentence for blank (X) and (Y). Write rearranged correct sentence on your answer sheet.

Words for blank (X)

multiply / need / nutrients / provide / they / the cells / to / with

Words for blank (Y)

cells / does / hold / just / more / together / than

Question 1-3.

Rearrange STEPs A – D as in a sequence of the procedure for lab-grown meat production. Write the name of the STEPs (A - D) on your answer sheet.

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Question 2

Read the passage below and answer the following questions.

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[Source: modified from

<https://www.thermofisher.com/jp/ja/home/life-science/cell-analysis/cell-analysis-learning-center/immunology-at-work/inflammation-overview.html>]

Question 2-1.

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. tissue damage | b. aging | c. regeneration | d. metabolism |
| (2) a. nonspecific immunity | b. passive immunity | c. innate immunity | d. acquired immunity |
| (3) a. heat shock proteins | b. nucleic acids | c. fibronectin | d. β amyloid |
| (4) a. regeneration | b. cell division | c. cell migration | d. cell death |

Question 2-2.

What are the factors causing inflammation?

Question 2-3.

Select the most appropriate cells from the choices and choose the most appropriate letter in Figure 1.

Choices:

Natural killer cells, Granulocytes, Dendritic cells, Monocytes, Macrophages, Cytotoxic T cells, T helper type 1 cells, T helper type 2 cells, Plasma B cells, Memory B cells

- (1) Phagocytic antigen presenting cells with an important role in alerting T cells to new pathogens. They act as key mediators between the innate and adaptive immune system. What are these cells?
- (2) Professional phagocytic tissue resident cells that destroy foreign antigens/cells by phagocytosis. They release cytokines that attract and activate other immune cells. What are these cells?
- (3) They can kill virus infected cells and cancer cells through interaction and the release of cytolytic chemicals. What are these cells?
- (4) They produce antibodies. Each cell produces only one antibody clone. What are these cells?

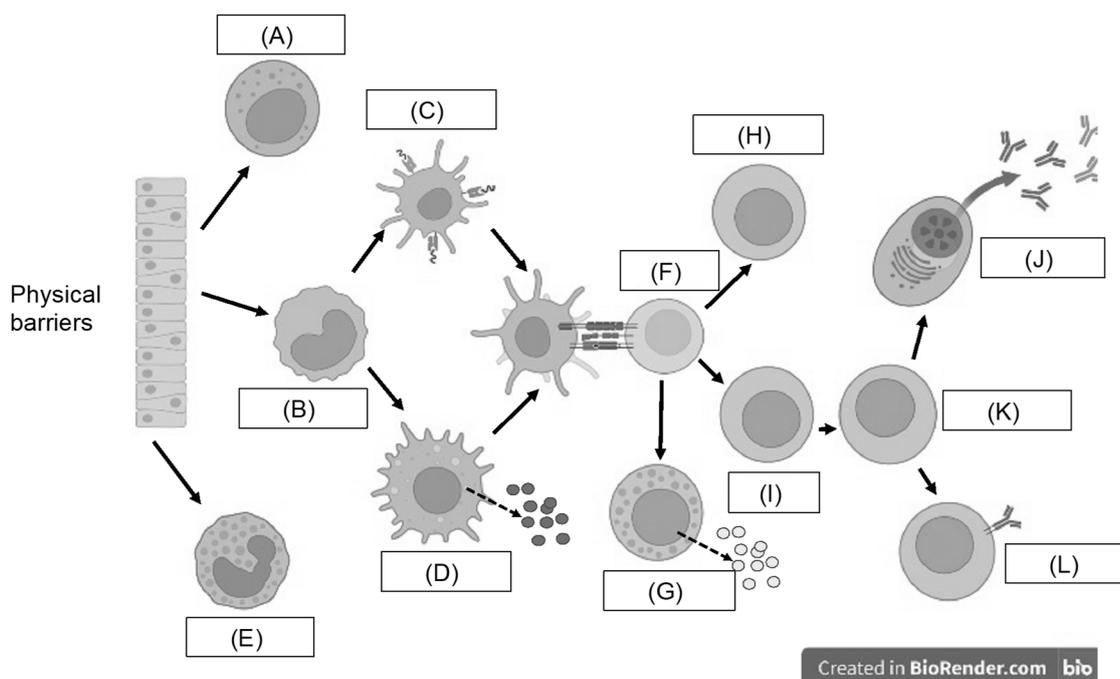


Figure 1. Inflammatory response.

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English 4 / 6

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Question 3

Read the passage below and answer the following questions.

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[Source : modified from Veterinary Epidemiologic Research, 2nd ed., VER Inc, 2015]

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博士課程

English 5 / 6

令和5年度10月入学

令和6年度4月入学（第1回）

Question 3-1

Choose the most appropriate word from the two choices for each blank. Write the corresponding letter (A or B) on your answer sheet.

- (1) A. risk B. disease
- (2) A. have B. do not have
- (3) A. exposed B. non-exposed

Question 3-2

On your answer sheet, write T if the statement is true or F if the statement is false.

- (1) Measures of association are used to investigate the strength of the relationship between an exposure to a disease and a disease.
- (2) OR ranges from 0 to 1.
- (3) An OR=1 indicates exposure has no association with disease.

Question 3-3

An example of the data for measuring the strength of association between exposure (dirty/clean) and disease (mastitis) are summarized in Table 2.

- (1) Calculate the OR and write the answer (the calculated OR value only) on your answer sheet.
- (2) According to the OR in (1), is there an association between the exposure and the disease? Write the answer on the sheet in English.

Table 2. An example of incidence risk data for mastitis in dairy cows

	Exposure		
	Dirty	Clean	
Mastitis	50	10	60
Non-mastitis	200	400	600
	250	410	660

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Question 4

Read the passage below and choose the most appropriate word or phrase from the four choices for each blank. Write the corresponding letter (a-d) on your answer sheet.

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[Source: Small Animal Internal Medicine, 6th edition, Clinical Manifestations of Gastrointestinal Disorders, ELSEVIER (2020) with modification]

- | | | | |
|--------------------------|---------------------------------------|--------------------------|-----------------------|
| (1) a. <i>Babesia</i> | b. <i>Ehrlichia</i> | c. <i>Tritrichomonas</i> | d. <i>Trypanosoma</i> |
| (2) a. sense | b. sensitive | c. sensitively | d. sensitiveness |
| (3) a. blood | b. feces | c. serum | d. urine |
| (4) a. causes | b. diagnoses | c. differentiates | d. originates |
| (5) a. despite | b. instead of | c. nor | d. without |
| (6) a. although | b. unless | c. because | d. since |
| (7) a. hematochezia | b. melena | c. vomiting | d. weight loss |
| (8) a. hypoalbuminemia | b. hypocholesterolemia | c. hypoglycemia | d. hyponatremia |
| (9) a. amino acids | b. fats | c. proteins | d. starch |
| (10) a. amylase activity | b. cholesterol concentration | | |
| | c. pancreatic lipase immunoreactivity | | |
| | d. trypsin-like immunoreactivity | | |