

**Fukushima Medical University**  
**Graduate School of Medicine**  
**PhD program**  
**Entrance Examination**  
**(Academic year 2026)**

- \* Choose two questions from the following three questions and answer them.**
- \* Write your examinee's number in each sheet as indicated.**

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Choose two questions from the following three questions and answer them.

**Question I**

Read the following passage on clinical research and answer the questions below.

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(S. V. Wang et al., *Nature Communications* 13, 2022)

1) List three or more factors that commonly hinder reproducibility in studies evaluating previous clinical research.

2) Explain the importance of real-world data in clinical research, particularly in the context of medical product development and dissemination.

**Question II**

Read the excerpt from the paper and answer the following questions.

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(quote from mBio. 2025 Mar 10;16(4))

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1. Describe the function of Tfh cells on B cell activation and the meaning of CD40L or CD57 expression on Tfh cells status.

2. Explain the correlation between Tfh cell phenotype and antibody response.

How does the expression of CD40L and CD57 on Tfh cells relate to antibody titers following routine vaccination or *Cryptosporidium* infection?

3. Given the observed associations in Figure 1 and 4, how might Tfh cell profiling inform public health and vaccine policy, or immunization timing among the Bangladeshi children?

State on your thought.

**Question III**

Read the Personal Viewpoint titled “Cultural Myth vs. Systemic Failure: Why Japan’s Deceased Organ Donation Rate Remains Stagnant” and answer the following questions.

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## Questions

1. The author illustrates Japan's extremely low deceased organ donation rate through several examples. Based on these examples, summarize the key characteristics of Japan's current organ donation situation in no more than 60 words.
2. According to the author, the primary reasons for Japan's low organ donation rate lie not in cultural attitudes but in systemic and healthcare-related factors. Summarize these main causes in 40–70 words, focusing specifically on institutional and medical system issues.
3. The author describes several structural shortcomings within Japan's medical system as elements of a broader "systemic failure." Assume you are a policy officer at the Ministry of Health, Labour and Welfare. Propose two or more distinct policy reforms. For each reform, clearly describe:
  - 1) The name or title of the policy,
  - 2) Its specific content, and
  - 3) The rationale based on evidence or arguments presented in the text.