

REVIEW OF RELATED DISEASE (RRD) 4 PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://rrd.examzify.com>



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	9
Explanations	11
Next Steps	17

SAMPLE

Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

SAMPLE

- 1. What are the mechanism subcategories of immunodeficiency, and what do congenital and acquired immunodeficiencies mean?**
 - A. Mechanism subcategories include humoral B-cell deficiency, cell-mediated T-cell deficiency, and combined B- and T-cell deficiency; congenital means present at birth; acquired develops after birth.
 - B. Mechanism subcategories include only humoral deficiency; congenital means acquired after birth.
 - C. There are no mechanism subcategories; all are congenital.
 - D. Mechanism subcategories include autoimmune, autoinflammatory, and allergy; congenital means present at birth.
- 2. What does the MMR vaccine stimulate, what happens once a person is immunized, why are boosters given, and what are MMR and tetanus booster schedules?**
 - A. It stimulates T-cell response; immunity is lifelong; boosters unnecessary.
 - B. It stimulates the body's immune system to create antibodies; once immunized, antibodies may last a lifetime but can wane; boosters are given because antibodies may weaken; MMR schedule is 12-15 months with a booster around age 5; tetanus boosters every 5-10 years.
 - C. It stimulates innate immunity; boosters are daily.
 - D. It stimulates mucosal immunity; immunization lasts for life; boosters are not needed.
- 3. In blood type B, which antigen is present on RBCs and which antibody is present in plasma that would react with type A blood?**
 - A. B antigen; anti-A antibodies
 - B. A antigen; anti-B antibodies
 - C. B antigen; anti-B antibodies
 - D. No antigen; antibodies
- 4. Which blood type has A, B, and Rh antigens present?**
 - A. AB-
 - B. O+
 - C. AB+
 - D. A+

- 5. Lupus can affect which organs, and why is it called a great imitator?**
- A. It affects only the skin.
 - B. It affects the brain and nerves.
 - C. Kidneys, lungs, joints, and skin; it is called a great imitator because it has many presentations and periods of flare-ups and remission.
 - D. It affects the liver and pancreas.
- 6. What acquired conditions can cause combined B-cell and T-cell immunodeficiency, and why do irradiation and cytotoxic drugs cause this?**
- A. Irradiation, cytotoxic cancer drugs, immunosuppressant drugs after transplant, and aging; they wipe out bone marrow, reducing T and B lymphocytes.
 - B. Only congenital genetic mutations cause such conditions.
 - C. Vaccinations cause such immunodeficiency.
 - D. Exercise-induced immune suppression.
- 7. Red blood cells have which antigens instead of HLAs?**
- A. ABO and Rh antigens
 - B. HLA antigens
 - C. Tumor antigens
 - D. MHC class II antigens
- 8. What is active acquired immunity, how can it happen, and what are natural and artificial active acquired immunity?**
- A. Active acquired immunity occurs when external antibodies are infused; natural active occurs after maternal antibody transfer; artificial after illness.
 - B. Active acquired immunity occurs when the person's own immunocyte system develops antibodies; natural active immunity occurs after a microbially induced illness; artificial active immunity occurs after vaccination with weakened or inactive microbes.
 - C. Active acquired immunity occurs when vaccines contain live pathogens; natural active occurs after exposure to toxins; artificial after illness.
 - D. Active acquired immunity occurs when the innate immune system is activated; natural after antibody transfer; artificial after gene therapy.

9. When can fetal blood enter the mother's system, and what happens in a subsequent Rh-positive pregnancy?

- A. Fetal blood may enter the mother's system only during early pregnancy.
- B. Fetal blood may enter during childbirth; if the mother is Rh-negative and exposed to Rh-positive fetal blood, she can develop antibodies that may affect a later Rh-positive fetus.
- C. Fetal blood never enters maternal circulation.
- D. In any subsequent pregnancy, antigen exposure is harmless.

10. What does the acronym HLA stand for?

- A. Human Lymphocyte Antigens
- B. Human Leukocyte Antigens
- C. Hematopoietic Lymphoid Antigens
- D. Host Leukocyte Analytes

SAMPLE

Answers

SAMPLE

1. A
2. D
3. A
4. C
5. C
6. A
7. A
8. B
9. B
10. B

SAMPLE

Explanations

SAMPLE

1. What are the mechanism subcategories of immunodeficiency, and what do congenital and acquired immunodeficiencies mean?

- A. Mechanism subcategories include humoral B-cell deficiency, cell-mediated T-cell deficiency, and combined B- and T-cell deficiency; congenital means present at birth; acquired develops after birth.**
- B. Mechanism subcategories include only humoral deficiency; congenital means acquired after birth.
- C. There are no mechanism subcategories; all are congenital.
- D. Mechanism subcategories include autoimmune, autoinflammatory, and allergy; congenital means present at birth.

The main idea is that immunodeficiency is classified by which part of the immune system is defective: humoral (B-cell) immunity, cell-mediated (T-cell) immunity, or both (combined B- and T-cell deficiency). Congenital means the deficiency is present at birth, usually due to inherited genetic mutations. Acquired means it develops after birth, often as a result of infections (like HIV), treatments (chemotherapy or immunosuppressants), malnutrition, or other illnesses. Clinically, humoral defects tend to cause recurrent bacterial infections, especially with encapsulated organisms; T-cell defects lead to viral, fungal, and intracellular infections; combined defects affect multiple arms and are typically more severe. Other terms like autoimmune, autoinflammatory, or allergy describe different kinds of immune dysregulation and don't fit the mechanism-by-immune-component framework.

2. What does the MMR vaccine stimulate, what happens once a person is immunized, why are boosters given, and what are MMR and tetanus booster schedules?

- A. It stimulates T-cell response; immunity is lifelong; boosters unnecessary.
- B. It stimulates the body's immune system to create antibodies; once immunized, antibodies may last a lifetime but can wane; boosters are given because antibodies may weaken; MMR schedule is 12-15 months with a booster around age 5; tetanus boosters every 5-10 years.
- C. It stimulates innate immunity; boosters are daily.
- D. It stimulates mucosal immunity; immunization lasts for life; boosters are not needed.**

Vaccines train the adaptive immune system to recognize specific pathogens by producing targeted antibodies and memory cells, so the body can respond quickly if exposed again. This is not primarily about mucosal immunity; MMR mainly induces systemic antibody and T-cell responses that persist for most people, though antibody levels can eventually decline and protection can wane over time in some cases. After vaccination, circulating antibodies and memory cells provide protection. Boosters are used when immunity may weaken enough that exposure could lead to disease, or to ensure protection across a population, such as completing the two-dose MMR schedule. For MMR, the typical schedule includes two doses: the first at about 12–15 months and a second around 4–6 years old. This second dose helps ensure long-lasting immunity across the population, particularly since some individuals may not respond fully to the first dose. For tetanus, booster doses are given every 10 years (Td or Tdap), with a booster recommended sooner if a significant wound occurs and vaccination status isn't up to date. This keeps protective antibody levels high, since tetanus immunity can wane over time. So, the idea that it mainly stimulates mucosal immunity, yields lifelong immunity with no boosters, and spares boosters altogether doesn't align with how these vaccines work and how their schedules are designed.

3. In blood type B, which antigen is present on RBCs and which antibody is present in plasma that would react with type A blood?

- A. B antigen; anti-A antibodies**
- B. A antigen; anti-B antibodies
- C. B antigen; anti-B antibodies
- D. No antigen; antibodies

The main idea is how ABO blood types are defined by surface antigens on red blood cells and the antibodies in plasma. In type B blood, red cells carry the B antigen, and the plasma has antibodies against the A antigen. If these cells encounter type A blood, the anti-A antibodies in the plasma recognize the A antigen on the donor red cells and bind to them, causing agglutination and potential hemolysis. This is why the combination described is B antigen on red cells with anti-A antibodies in the plasma.

4. Which blood type has A, B, and Rh antigens present?

- A. AB-
- B. O+
- C. AB+**
- D. A+

The presence of A and B antigens on red blood cells, along with the Rh(D) antigen, defines AB positive. This is the only blood type that carries both A and B antigens and is Rh positive, so it uniquely has all three markers. If any one of those antigens is missing—A or B or Rh—the type would be different (for example, lacking Rh means negative, or lacking one of A/B means the absence of that antigen).

5. Lupus can affect which organs, and why is it called a great imitator?

- A. It affects only the skin.
- B. It affects the brain and nerves.
- C. Kidneys, lungs, joints, and skin; it is called a great imitator because it has many presentations and periods of flare-ups and remission.**
- D. It affects the liver and pancreas.

Lupus is a systemic autoimmune disease that can involve multiple organ systems. It commonly affects the kidneys (lupus nephritis), lungs (pleuritis or pneumonitis), joints (arthritis and arthralgias), and skin (malar or discoid rashes). It's called a great imitator because its signs and symptoms are highly variable and can resemble many other conditions. Patients may present with joint pain, skin rashes, kidney problems, or neuropsychiatric symptoms that mimic other diseases, and the disease can wax and wane with periods of flare-up and remission. This broad, shifting presentation is what gives lupus its reputation as a great imitator. Other options are too limited (skin only) or focus on organs not typically primary targets, and they don't capture the systemic, relapsing nature of the disease.

6. What acquired conditions can cause combined B-cell and T-cell immunodeficiency, and why do irradiation and cytotoxic drugs cause this?

A. Irradiation, cytotoxic cancer drugs, immunosuppressant drugs after transplant, and aging; they wipe out bone marrow, reducing T and B lymphocytes.

B. Only congenital genetic mutations cause such conditions.

C. Vaccinations cause such immunodeficiency.

D. Exercise-induced immune suppression.

Combined B-cell and T-cell immunodeficiency occurs when the production of lymphocytes is severely disrupted, so both humoral and cellular immunity are weakened. Irradiation and cytotoxic cancer drugs are designed to kill rapidly dividing cells, and hematopoietic stem cells in the bone marrow fit that description. Damaging these progenitor cells drastically reduces the production of both B cells (which develop in the bone marrow) and T cells (which derive from bone marrow progenitors and mature in the thymus). That bone marrow suppression leads to a drop in lymphocytes of both lineages, producing a combined immunodeficiency. Aging contributes because the thymus involutes with age, lowering new T-cell output and narrowing the T-cell repertoire, and there can be overall declines in immune function. Immunosuppressant drugs after transplant also blunt T-cell activity and, by extension, the coordinated B-cell response. Vaccinations and exercise-induced suppression do not create this broad, sustained defect in both B and T cells.

7. Red blood cells have which antigens instead of HLAs?

A. ABO and Rh antigens

B. HLA antigens

C. Tumor antigens

D. MHC class II antigens

The important idea is that red blood cells carry their own set of surface antigens that determine blood type, not HLAs. Red cells display ABO antigens and the Rh (D) antigen on their membranes. HLAs are part of the MHC system and are expressed mainly on nucleated cells like white blood cells and tissue cells, not on mature red blood cells. Since red cells lack nuclei and the typical antigen-presenting machinery, they don't have HLA antigens. That's why the antigens relevant to red blood cells are the ABO and Rh systems, which clinicians use to assess transfusion compatibility and determine blood type.

8. What is active acquired immunity, how can it happen, and what are natural and artificial active acquired immunity?

- A. Active acquired immunity occurs when external antibodies are infused; natural active occurs after maternal antibody transfer; artificial after illness.
- B. Active acquired immunity occurs when the person's own immunocyte system develops antibodies; natural active immunity occurs after a microbially induced illness; artificial active immunity occurs after vaccination with weakened or inactive microbes.**
- C. Active acquired immunity occurs when vaccines contain live pathogens; natural active occurs after exposure to toxins; artificial after illness.
- D. Active acquired immunity occurs when the innate immune system is activated; natural after antibody transfer; artificial after gene therapy.

Active acquired immunity is when the body's own immune system produces its own antibodies or immune cells in response to an antigen, leading to long-term memory for future protection. It happens naturally after exposure to an infection, where the immune system learns to recognize and fight that microbe, and artificially through vaccination, which uses weakened or inactivated microbes or their components to trigger the same immune response without causing illness. This distinction explains natural active immunity as protection gained after illness and artificial active immunity as protection gained after vaccination.

9. When can fetal blood enter the mother's system, and what happens in a subsequent Rh-positive pregnancy?

- A. Fetal blood may enter the mother's system only during early pregnancy.
- B. Fetal blood may enter during childbirth; if the mother is Rh-negative and exposed to Rh-positive fetal blood, she can develop antibodies that may affect a later Rh-positive fetus.**
- C. Fetal blood never enters maternal circulation.
- D. In any subsequent pregnancy, antigen exposure is harmless.

The key idea is Rh sensitivity (alloimmunization) and how maternal antibodies affect a later pregnancy. Fetal blood can enter the mother's circulation not just early on, but particularly during delivery when placental vessels rupture and fetal cells mix with maternal blood. If the mother is Rh-negative and is exposed to Rh-positive fetal red cells, she can develop anti-D antibodies (IgG) that cross the placenta in a subsequent pregnancy. If the next fetus is Rh-positive, these antibodies can bind to the fetal red cells, causing hemolysis and potential fetal anemia or more severe disease. That's why this option is the best: it correctly identifies the exposure during childbirth and the consequence of maternal antibody formation that can affect a later Rh-positive fetus. The other statements are off because fetal blood can enter circulation during delivery (not only early pregnancy), fetal-maternal transfusion can occur, and antigen exposure can cause problematic outcomes in later pregnancies rather than being harmless.

10. What does the acronym HLA stand for?

- A. Human Lymphocyte Antigens
- B. Human Leukocyte Antigens**
- C. Hematopoietic Lymphoid Antigens
- D. Host Leukocyte Analytes

HLA stands for Human Leukocyte Antigens. These are proteins on the surface of most cells that are part of the immune system's way to distinguish self from non-self by presenting peptide fragments to T cells. This makes them crucial in tissue matching for transplantation, since closer HLA matches reduce the risk of rejection. The term Leukocyte is used because it refers to white blood cells in general, not a specific subtype like lymphocytes; the other options mix different terms that aren't used for this acronym, such as lymphocytes, hematopoietic/lymphoid phrasing, or analytes. So the best choice is the one that reads Human Leukocyte Antigens.

SAMPLE

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://rrd.examzify.com>

We wish you the very best on your exam journey. You've got this!

SAMPLE