

PLAB ENDOCRINOLOGY PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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

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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

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- 1. What effect does thyroid hormone have on metabolism?**
 - A. Inhibits metabolic processes
 - B. Has no effect on metabolism
 - C. Accelerates metabolic processes
 - D. Registers slight decreases in metabolic activity
- 2. What is the single most likely diagnosis for a 30-year-old man with episodic headaches, palpitations, anxiety, and high blood pressure?**
 - A. Hyperthyroidism
 - B. Panic attacks
 - C. Pheochromocytoma
 - D. Cushing's disease
- 3. What is the most likely diagnosis for a 23-year-old woman with secondary amenorrhea, dark neck pigmentation, severe acne, and low potassium?**
 - A. Acquired hypothyroidism
 - B. Primary hyperaldosteronism
 - C. Cushing's syndrome
 - D. Addison's disease
- 4. What is a classic symptom of Graves' disease?**
 - A. Weight gain and fatigue
 - B. Exophthalmos (protruding eyes)
 - C. Hypoglycemia
 - D. Joint pain
- 5. A 9 year old boy presents with glycosuria after an appendectomy but has no history of diabetes. What is the most appropriate follow-up investigation?**
 - A. Fasting blood glucose
 - B. Glycated haemoglobin (HbA1c)
 - C. 24 hour urine cortisol
 - D. Random blood glucose

- 6. A 45-year-old lady presents with diarrhea and hyperpigmentation alongside hypotension. What electrolyte abnormality is most likely?**
- A. Sodium 130 mmol/L, potassium 6.2 mmol/L
 - B. Sodium 125 mmol/L, potassium 2.9 mmol/L
 - C. Sodium 140 mmol/L, potassium 4.5 mmol/L
 - D. Sodium 150 mmol/L, potassium 3.5 mmol/L
- 7. What endocrine disorder is characterized by the presence of symptoms attributed to excessive production of growth hormone in children?**
- A. Acromegaly
 - B. Gigantism
 - C. Dwarfism
 - D. Thyroid storm
- 8. A 42-year-old woman with unexplained nipple discharge has lost her libido. What is the most likely diagnosis?**
- A. Hyperprolactinaemia
 - B. Cushing's syndrome
 - C. Pheochromocytoma
 - D. Hyperthyroidism
- 9. What effect does cortisol have on the immune system?**
- A. It stimulates the immune response
 - B. It suppresses the immune response
 - C. It has no effect on the immune response
 - D. It enhances antibody production
- 10. What does the presence of antinuclear antibodies (ANAs) indicate in the context of endocrinology?**
- A. Potential autoimmune disorders
 - B. Vitamin D deficiency
 - C. Excessive thyroid function
 - D. Hydration status

Answers

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

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Explanations

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1. What effect does thyroid hormone have on metabolism?

- A. Inhibits metabolic processes
- B. Has no effect on metabolism
- C. Accelerates metabolic processes**
- D. Registers slight decreases in metabolic activity

Thyroid hormone plays a pivotal role in regulating metabolism. It primarily acts to accelerate metabolic processes, which is crucial for various physiological functions. This acceleration occurs because thyroid hormones, mainly thyroxine (T4) and triiodothyronine (T3), enhance the basal metabolic rate by increasing the rate of oxygen consumption and heat production in tissues. They promote the metabolism of carbohydrates, fats, and proteins, thus elevating the overall energy expenditure of the body. Thyroid hormones stimulate metabolic pathways such as glycolysis, gluconeogenesis, lipolysis, and protein synthesis. This stimulation leads to increased levels of key enzymes involved in these pathways, highlighting their significant impact on both the synthesis and breakdown of various substrates in the body. Because of this direct effect on metabolic processes, the notion that thyroid hormone inhibits, has no effect at all, or merely registers slight decreases in metabolic activity does not hold true. Rather, the correct understanding is that thyroid hormones are essential for proper metabolic functioning and energy homeostasis, making the acceleration of metabolic processes their primary effect.

2. What is the single most likely diagnosis for a 30-year-old man with episodic headaches, palpitations, anxiety, and high blood pressure?

- A. Hyperthyroidism
- B. Panic attacks
- C. Pheochromocytoma**
- D. Cushing's disease

The symptoms presented in the case—a 30-year-old man experiencing episodic headaches, palpitations, anxiety, and high blood pressure—are highly indicative of pheochromocytoma. This tumor arises from the adrenal medulla and primarily secretes catecholamines, which include epinephrine and norepinephrine. These hormones can lead to episodic symptoms such as headache, palpitations (due to increased heart rate), anxiety, and significant increases in blood pressure. Pheochromocytoma is known for causing paroxysmal episodes of these symptoms, which aligns well with the description of "episodic" headaches and the associated cardiovascular symptoms. The anxiety noted may stem from the catecholamine surge as well. While hyperthyroidism can also cause palpitations and anxiety, it tends to present with additional systemic symptoms such as weight loss, heat intolerance, and a hyperdynamic circulation, which are not mentioned here. Panic attacks could explain the anxiety and palpitations, but they would not typically present with consistently high blood pressure or headaches. Cushing's disease leads to a distinct set of symptoms characterized by weight gain, changes in skin, and a characteristic appearance, which do not align as closely with the episodic and acute

3. What is the most likely diagnosis for a 23-year-old woman with secondary amenorrhea, dark neck pigmentation, severe acne, and low potassium?

- A. Acquired hypothyroidism
- B. Primary hyperaldosteronism
- C. Cushing's syndrome**
- D. Addison's disease

The symptoms presented in this case—the combination of secondary amenorrhea, dark neck pigmentation, severe acne, and low potassium—strongly suggest Cushing's syndrome as the most likely diagnosis. Cushing's syndrome is characterized by excess cortisol, which can be caused by various factors, such as a pituitary adenoma (Cushing's disease), adrenal tumors, or ectopic ACTH production. One of the hallmark features of Cushing's syndrome is the distinctive physical changes it causes, including the development of hirsutism and severe acne due to androgen excess, which aligns with this patient's presentation. The dark neck pigmentation can indicate a condition known as hyperpigmentation, which is sometimes seen in Cushing's syndrome due to cortisol's interaction with the skin. The presence of low potassium is particularly telling, as hypokalemia can arise from the mineralocorticoid effects of excess cortisol, which leads to increased sodium retention and potassium secretion. Given these clinical signs, the diagnosis of Cushing's syndrome fits best with the combination of secondary amenorrhea, severe acne, and low potassium levels, distinguishing it effectively from the other conditions listed. For instance, acquired hypothyroidism typically presents with symptoms like fatigue, weight gain, and cold

4. What is a classic symptom of Graves' disease?

- A. Weight gain and fatigue
- B. Exophthalmos (protruding eyes)**
- C. Hypoglycemia
- D. Joint pain

Graves' disease is an autoimmune disorder that leads to overactivity of the thyroid gland, resulting in hyperthyroidism. A classic symptom associated with Graves' disease is exophthalmos, which refers to the protrusion of the eyes. This condition occurs due to the accumulation of glycosaminoglycans in the retro-orbital space, causing swelling and pushing the eyes forward. This symptom is quite distinctive and helps differentiate Graves' disease from other forms of hyperthyroidism and thyroid dysfunction. While other symptoms of hyperthyroidism can include weight loss, increased appetite, heat intolerance, and nervousness, exophthalmos is particularly characteristic of Graves' due to the underlying autoimmune process affecting the eyes and surrounding tissues. In contrast, the other options do not align with the typical presentation of Graves' disease. Weight gain and fatigue are not typical of hyperthyroidism, which generally leads to weight loss and increased energy levels. Hypoglycemia is not a direct symptom of Graves' disease; rather, it is often related to insulin or metabolic issues. Joint pain may occur in various conditions but is not a hallmark symptom of Graves' disease.

5. A 9 year old boy presents with glycosuria after an appendectomy but has no history of diabetes. What is the most appropriate follow-up investigation?

- A. Fasting blood glucose**
- B. Glycated haemoglobin (HbA1c)
- C. 24 hour urine cortisol
- D. Random blood glucose

The most appropriate follow-up investigation in this scenario is fasting blood glucose. This test is crucial in evaluating the possibility of diabetes mellitus, particularly since the child has presented with glycosuria, which means that glucose is present in the urine. In the absence of a known history of diabetes, assessing fasting blood glucose levels can provide essential information regarding the child's glucose metabolism and whether there is a need for further investigation or intervention. When fasting blood glucose levels are measured, they provide a snapshot of how well the body is managing glucose without the influence of recent food intake. In children, like adults, a fasting blood glucose level of 126 mg/dL or higher is indicative of diabetes. Additionally, if an abnormal result is found, it may warrant further testing, such as an oral glucose tolerance test, to confirm a diagnosis. Other investigations such as glycated hemoglobin (HbA1c) are useful for assessing long-term glucose control and may not be as reliable in the acute context following the child's appendectomy. Similarly, while random blood glucose could be informative, fasting levels are preferred when assessing for diabetes, especially since the presence of glycosuria suggests that further evaluation of blood glucose is necessary. The 24-hour urine cortisol test pertains more to adrenal function

6. A 45-year-old lady presents with diarrhea and hyperpigmentation alongside hypotension. What electrolyte abnormality is most likely?

- A. Sodium 130 mmol/L, potassium 6.2 mmol/L**
- B. Sodium 125 mmol/L, potassium 2.9 mmol/L
- C. Sodium 140 mmol/L, potassium 4.5 mmol/L
- D. Sodium 150 mmol/L, potassium 3.5 mmol/L

The presentation of the 45-year-old lady includes diarrhea, hyperpigmentation, and hypotension, which suggests a clinical picture consistent with adrenal insufficiency, potentially Addison's disease. In adrenal insufficiency, particularly in primary adrenal insufficiency, electrolyte abnormalities are common due to a deficiency of glucocorticoids and mineralocorticoids. The correct answer indicates a sodium level of 130 mmol/L and a potassium level of 6.2 mmol/L. In this scenario, the hyponatremia (low sodium) can occur due to inadequate aldosterone secretion, leading to sodium loss through the kidneys. Meanwhile, the hyperkalemia (high potassium) results from a lack of aldosterone, which is responsible for increasing the renal excretion of potassium. Since aldosterone levels are low in adrenal insufficiency, the kidneys retain more potassium, causing elevated serum potassium levels. This combination of low sodium and high potassium specifically aligns with the symptoms presented, supporting the diagnosis of adrenal insufficiency. The hypotension further indicates a possible volume depletion due to inadequate sodium retention, while hyperpigmentation can also be attributed to the increased ACTH levels that occur due to low cortisol, stimulating melanocytes. In contrast, the other choices present different sodium and

7. What endocrine disorder is characterized by the presence of symptoms attributed to excessive production of growth hormone in children?

- A. Acromegaly
- B. Gigantism**
- C. Dwarfism
- D. Thyroid storm

The endocrine disorder characterized by excessive production of growth hormone in children is indeed gigantism. This condition arises when there is an overproduction of growth hormone, usually due to a benign tumor in the pituitary gland known as an adenoma. In children, before the growth plates have fused, this excess growth hormone leads to excessive linear growth, resulting in individuals who are significantly taller than average for their age. Gigantism manifests as not only increased height but also other symptoms, such as disproportionately large hands and feet, and can include various metabolic changes. The timing of growth hormone excess is crucial; if it occurs before the growth plates close, it results in gigantism, whereas in adults, after the growth plates have fused, excess growth hormone leads to acromegaly, which includes features like enlarged facial bones and soft tissues but does not affect height. Dwarfism represents a condition of short stature caused by various factors, primarily growth hormone deficiency, thus contrasting with gigantism. Thyroid storm relates to an extreme form of hyperthyroidism and is unrelated to growth hormone dynamics. Therefore, the hallmark signs of gigantism, specifically the excessive growth experienced by children, make it the correct and appropriate identification for this endocrine disorder.

8. A 42-year-old woman with unexplained nipple discharge has lost her libido. What is the most likely diagnosis?

- A. Hyperprolactinaemia**
- B. Cushing's syndrome
- C. Pheochromocytoma
- D. Hyperthyroidism

The most likely diagnosis for a 42-year-old woman presenting with unexplained nipple discharge and loss of libido is hyperprolactinaemia. Elevated levels of prolactin can lead to galactorrhea (nipple discharge) and sexual dysfunction, particularly libido loss. This condition can arise due to a variety of causes, including prolactin-secreting pituitary tumors (prolactinomas), hypothyroidism, certain medications, and stress. The symptoms align with hyperprolactinaemia's well-known effects on reproductive health, where increased prolactin inhibits gonadotropin-releasing hormone (GnRH) secretion, leading to lower levels of sex hormones that can manifest as reduced libido and breast discharge. In contrast to this condition, Cushing's syndrome is characterized by excess cortisol which can lead to a range of symptoms including weight gain, hypertension, and hyperglycemia but is less directly associated with nipple discharge and libido changes as a primary symptom. Pheochromocytoma involves an adrenal tumor producing excess catecholamines, leading to symptoms related to adrenergic stimulation (palpitations, sweating, hypertension) rather than hormonal effects on lactation or libido. Hyperthyroidism can cause various symptoms such as weight

9. What effect does cortisol have on the immune system?

- A. It stimulates the immune response
- B. It suppresses the immune response**
- C. It has no effect on the immune response
- D. It enhances antibody production

Cortisol, a glucocorticoid hormone produced by the adrenal cortex, plays a significant role in modulating the immune response. Its primary effect on the immune system is to suppress the immune response. This action is essential for preventing excessive inflammation and tissue damage that could occur during an immune reaction. Cortisol achieves this suppression through various mechanisms, including inhibiting the production and activity of pro-inflammatory cytokines, reducing the proliferation of certain immune cells (like T cells), and decreasing the function of other components of the immune system. By dampening the immune response, cortisol helps in maintaining homeostasis and preventing conditions such as autoimmunity, where the immune system might otherwise attack the body's own tissues. Due to its immunosuppressive properties, cortisol is often utilized clinically to treat autoimmune diseases, allergic reactions, and in managing conditions where a reduced immune response is beneficial. Understanding the role cortisol plays in the immune system is crucial for recognizing its effects in both health and disease, as well as its implications in treatments involving corticosteroids.

10. What does the presence of antinuclear antibodies (ANAs) indicate in the context of endocrinology?

- A. Potential autoimmune disorders**
- B. Vitamin D deficiency
- C. Excessive thyroid function
- D. Hydration status

The presence of antinuclear antibodies (ANAs) is primarily indicative of potential autoimmune disorders. ANAs are a type of antibody that targets substances within the nucleus of cells, and their presence in the bloodstream can signal the underlying activity of an autoimmune process. In the context of endocrinology, this is particularly relevant because many autoimmune conditions can affect endocrine organs. For example, conditions like autoimmune thyroid disease (including Hashimoto's thyroiditis and Graves' disease) are associated with the presence of ANAs. Identifying ANAs can help in diagnosing and managing various autoimmune conditions that may not only involve the endocrine system but also other organs and systems in the body. Detecting ANAs allows healthcare providers to more effectively assess a patient's symptoms and tailor treatment plans accordingly. The other options, while relevant in different contexts, do not directly relate to the significance of ANAs in diagnosing or indicating autoimmune activity. For instance, vitamin D deficiency is evaluated through serum levels of vitamin D, not ANAs. Similarly, excessive thyroid function is assessed through specific thyroid function tests rather than the presence of ANAs, and hydration status is typically monitored through clinical assessments and laboratory tests unrelated to autoimmune markers. Thus, option A accurately represents the clinical implications of detecting antinuclear antibodies

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:

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

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