PLAB ENDOCRINOLOGY PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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.

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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!

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Questions

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1. **What is the primary organizational structure of the endocrine system's regulatory mechanism?**

   A. Neural pathways

   B. Feedback loops

   C. Hormonal receptors

   D. Organ-specific circuits

2. **A 29-year-old Afro-Caribbean man presents with a non-productive cough and elevated ESR. What is the most likely diagnosis?**

   A. Osteoporosis

   B. Thiazide diuretics

   C. Primary hyperparathyroidism

   D. Sarcoidosis

3. **Which hormone is known as the stress hormone due to its role in the body's response to stress?**

   A. Cortisol

   B. Adrenaline

   C. Norepinephrine

   D. Testosterone

4. **A patient presents with fruity breath, abdominal pain, and high blood glucose. What is the most appropriate immediate management?**

   A. Oral rehydration

   B. IV dextrose

   C. Subcutaneous insulin immediately

   D. Intravenous fluids followed by insulin

5. **Which symptom is most likely in a patient experiencing Cushing's syndrome?**

   A. Muscle weakness

   B. Weight loss

   C. Hyperthyroidism signs

   D. Low blood sugar

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6. Which symptom is most commonly associated with hyperthyroidism?

A. Weight gain

B. Cold intolerance

C. Tremors

D. Fatigue

7. 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

8. A man presents with bitemporal hemianopia and facial changes. What test is most definitive for confirming his diagnosis?

A. Early morning growth hormone

B. Prolactin level

C. Oral glucose tolerance test with serial growth hormone measurements

D. Random insulin-like growth factor (IGF-1)

9. Which anti-hypertensive medication is most likely responsible for high potassium and low sodium levels in a patient?

A. Amlodipine

B. Bendroflumethiazide

C. Doxazosin

D. Ramipril

10. What is the most likely reason for abdominal pain and severe vomiting in a 26 year old woman receiving steroid treatment for carcinoma?

A. Steroids side effects

B. Metastasis of cancer

C. Adrenal insufficiency

D. Conn's disease

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Answers

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

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Explanations

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1. What is the primary organizational structure of the endocrine system's regulatory mechanism?

A. Neural pathways

B. Feedback loops

C. Hormonal receptors

D. Organ-specific circuits

The primary organizational structure of the endocrine system's regulatory mechanism is best characterized by feedback loops. Feedback loops serve as a critical method for the regulation of hormone levels and the maintenance of homeostasis within the body. In a feedback loop, the body continuously monitors the levels of hormones in circulation. When hormone levels rise above or fall below a certain threshold, this triggers a response that either amplifies or reduces hormone secretion. There are two main types of feedback loops: negative feedback, which inhibits further hormone release when levels are adequate, and positive feedback, which enhances the production of hormones in response to specific stimuli. For instance, in the case of negative feedback, when thyroid hormones such as T3 and T4 increase, they signal the hypothalamus and pituitary gland to decrease the production of Thyroid Stimulating Hormone (TSH), thereby reducing further thyroid hormone release. This self-regulating mechanism is critical for maintaining equilibrium in physiological processes. Other options, while relevant to the endocrine system, do not represent the primary organizational structure. Neural pathways, for example, are more associated with the nervous system and can interact with the endocrine system, but they do not constitute its main regulatory framework. Hormonal receptors are vital for the action of hormones, and

2. A 29-year-old Afro-Caribbean man presents with a non-productive cough and elevated ESR. What is the most likely diagnosis?

A. Osteoporosis

B. Thiazide diuretics

C. Primary hyperparathyroidism

D. Sarcoidosis

The most likely diagnosis in this scenario is sarcoidosis, particularly given the patient's demographic and clinical presentation. Sarcoidosis is a systemic granulomatous disease that commonly affects young adults and has a higher prevalence in Afro-Caribbean individuals. The symptoms of a non-productive cough coupled with an elevated erythrocyte sedimentation rate (ESR) are significant. The cough can be attributed to pulmonary involvement, as sarcoidosis often affects the lungs and leads to various respiratory symptoms. The elevated ESR indicates inflammation, which is consistent with the granulomatous nature of sarcoidosis. While other conditions can also present with elevated ESR or respiratory symptoms, they do not fit as well with both the demographic and clinical manifestations observed here. Osteoporosis does not typically present with respiratory symptoms. Thiazide diuretics are medications and not a diagnosis, and while primary hyperparathyroidism can cause a range of symptoms including bone pain and renal stones, it is not characterized by a cough or elevated ESR in the same way sarcoidosis is. Therefore, considering the age, ethnicity, and clinical findings, sarcoidosis emerges as the most likely diagnosis in this case.

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3. Which hormone is known as the stress hormone due to its role in the body's response to stress?

A. Cortisol

B. Adrenaline

C. Norepinephrine

D. Testosterone

Cortisol is often referred to as the "stress hormone" because it is a crucial component of the body's response to stress. When the body perceives stress, whether physical or emotional, the adrenal glands release cortisol as part of the hypothalamic-pituitary-adrenal (HPA) axis response. This hormone helps to manage stress by increasing glucose availability, enhancing energy production, and modulating various metabolic processes, thereby allowing the body to respond effectively to stressors. Cortisol also plays a role in reducing inflammation and suppressing the immune response, which can be beneficial during acute stress situations. Its levels typically fluctuate throughout the day, usually peaking in the morning and declining throughout the day. This pattern helps regulate various bodily functions and contributes to maintaining homeostasis. In contrast, while adrenaline (epinephrine) and norepinephrine are also involved in the stress response, they act more rapidly and are primarily responsible for the immediate "fight or flight" response. Adrenaline increases heart rate and blood flow to muscles, whereas norepinephrine influences functions such as attention and response actions. Testosterone, though an important hormone for many physiological processes, does not primarily function in the stress response and is not characterized as a stress hormone. Hence

4. A patient presents with fruity breath, abdominal pain, and high blood glucose. What is the most appropriate immediate management?

A. Oral rehydration

B. IV dextrose

C. Subcutaneous insulin immediately

D. Intravenous fluids followed by insulin

The presentation of fruity breath, abdominal pain, and high blood glucose is indicative of diabetic ketoacidosis (DKA). In DKA, the accumulation of ketones in the blood leads to metabolic acidosis, severe dehydration, and an elevated blood glucose level. The most appropriate immediate management involves addressing the underlying causes and complications of DKA. This includes administering intravenous fluids to rehydrate the patient, correct electrolyte imbalances, and provide insulin therapy to lower blood glucose levels. Starting with intravenous fluids helps to rehydrate the patient and improve renal perfusion, which is critical in facilitating glucose and ketone clearance. After initial fluid resuscitation, insulin is introduced to inhibit ketogenesis and lower blood glucose levels. This combination not only addresses the high glucose levels but also helps to correct the metabolic acidosis by promoting utilization of glucose and preventing further fat breakdown, which is responsible for ketone production. Therefore, intravenous fluids followed by insulin is the most appropriate immediate management for a patient in this state.

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5. Which symptom is most likely in a patient experiencing Cushing's syndrome?

A. Muscle weakness

B. Weight loss

C. Hyperthyroidism signs

D. Low blood sugar

Muscle weakness is a classic symptom associated with Cushing's syndrome, which is caused by chronic exposure to excess glucocorticoids, such as cortisol. Patients often experience muscle weakness, particularly in the proximal muscles, which can lead to difficulties in activities such as climbing stairs or lifting objects. This weakness is related to the catabolic effects of excessive cortisol, which promotes protein breakdown and inhibits muscle protein synthesis. In contrast, the other symptoms listed do not align with Cushing's syndrome. Weight loss is not typical; rather, patients usually experience significant weight gain due to fat redistribution. Signs of hyperthyroidism, such as increased metabolism and weight loss, are not relevant as Cushing's syndrome is linked to elevated cortisol levels rather than thyroid hormone levels. Finally, patients with Cushing's syndrome typically do not exhibit low blood sugar; rather, they may have elevated blood sugar levels due to cortisol's effects on gluconeogenesis and insulin resistance. Hence, muscle weakness is the most characteristic symptom of Cushing's syndrome.

6. Which symptom is most commonly associated with hyperthyroidism?

A. Weight gain

B. Cold intolerance

C. Tremors

D. Fatigue

Hyperthyroidism is characterized by an overproduction of thyroid hormones, which can significantly increase the body's metabolic rate. This heightened metabolic activity often manifests in a variety of symptoms, with tremors being one of the most typical manifestations. The increased levels of thyroid hormones stimulate the nervous system, leading to heightened muscle activity and tremors, particularly in the hands. The symptoms associated with hyperthyroidism generally include increased heart rate, weight loss despite increased appetite, heat intolerance, and nervousness or anxiety, alongside tremors. These tremors are often fine and may be noticeable during specific activities or at rest. In contrast, the other options present symptoms that are not predominantly associated with hyperthyroidism. Weight gain, for instance, is more commonly connected to hypothyroidism, where there is a decrease in hormone production leading to slowed metabolism. Cold intolerance also aligns more with an underactive thyroid. Fatigue can be seen in both conditions, but it is not as specific to hyperthyroidism as the presence of tremors, making tremors a hallmark symptom of this condition.

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7. 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

8. A man presents with bitemporal hemianopia and facial changes. What test is most definitive for confirming his diagnosis?

A. Early morning growth hormone

B. Prolactin level

C. Oral glucose tolerance test with serial growth hormone measurements

D. Random insulin-like growth factor (IGF-1)

The presence of bitemporal hemianopia, coupled with facial changes, suggests the presence of a mass lesion, likely a pituitary adenoma, which can affect adjacent structures such as the optic chiasm. In this context, the most definitive test to confirm the diagnosis of an acromegaly caused by a growth hormone-secreting tumor is the oral glucose tolerance test (OGTT) with serial growth hormone measurements. During an OGTT, the patient consumes a glucose-rich drink, and in a healthy individual, growth hormone levels should decrease as a response to the hyperglycemia. However, in cases of growth hormone excess, such as with a pituitary adenoma, growth hormone levels will remain elevated despite the glucose challenge. This characteristic response is crucial for diagnosing acromegaly linked to a functional pituitary adenoma, as it provides direct evidence of growth hormone dysregulation. Other tests mentioned, such as measuring early morning growth hormone or random IGF-1 levels, can provide supportive evidence but are not as definitive. While elevated IGF-1 levels can indicate increased growth hormone secretion over time, they do not show the failure of suppression, which is specifically tested by the OGTT. Prolactin levels, although

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9. Which anti-hypertensive medication is most likely responsible for high potassium and low sodium levels in a patient?

A. Amlodipine

B. Bendroflumethiazide

C. Doxazosin

D. Ramipril

The medication responsible for causing high potassium and low sodium levels is Ramipril. This medication is an angiotensin-converting enzyme (ACE) inhibitor, which is commonly used to manage hypertension and heart failure. ACE inhibitors can lead to hyperkalemia, or elevated potassium levels, as they decrease the production of aldosterone, a hormone that promotes the excretion of potassium and the retention of sodium by the kidneys. In the absence of sufficient aldosterone, potassium excretion is impaired, causing a rise in potassium levels. Additionally, Ramipril can lead to a decrease in sodium levels, as the lack of aldosterone results in less sodium reabsorption. This combination can therefore produce the electrolyte abnormalities of high potassium (hyperkalemia) and low sodium (hyponatremia), making it the most likely medication from the options provided to cause these changes in a patient. In contrast, the other options, such as amlodipine, bendroflumethiazide, and doxazosin, are not typically associated with such significant alterations in potassium and sodium levels in the same way as Ramipril. Amlodipine is a calcium channel blocker and primarily does not affect electrolyte levels significantly. Bendroflum

10. What is the most likely reason for abdominal pain and severe vomiting in a 26 year old woman receiving steroid treatment for carcinoma?

A. Steroids side effects

B. Metastasis of cancer

C. Adrenal insufficiency

D. Conn's disease

The most likely reason for abdominal pain and severe vomiting in a 26-year-old woman undergoing steroid treatment for carcinoma is adrenal insufficiency. This condition can occur when long-term steroid therapy is abruptly discontinued or when the body is unable to produce enough adrenal hormones due to suppressed adrenal function, particularly in patients who have been on high doses of corticosteroids. Patients receiving corticosteroids can experience a suppression of the hypothalamic-pituitary-adrenal (HPA) axis, which can lead to adrenal insufficiency. When these patients experience stress (such as illness or surgery), the already suppressed adrenal glands may not be able to produce sufficient cortisol, which is crucial for managing metabolic processes and inflammatory responses. The symptoms of adrenal insufficiency include abdominal pain, vomiting, fatigue, and hypotension, all of which might manifest in this scenario. It's important to be aware of the potential consequences of steroid withdrawal, which might present as an adrenal crisis, especially if the patient has been on long-term treatment. In situations where a patient is receiving steroids, the clinician must remain cautious about the possibility of inadequate adrenal hormone production during physical stress or if the steroids are tapered or discontinued too quickly.

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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.

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

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