NBEO SYSTEMIC DISEASE 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 type of tumor is seen in the background of Sturge Weber Syndrome?**

   A. Oligodendroglioma

   B. Astrocytic hamartoma

   C. Meningioma

   D. Neuroblastoma

2. **Where are arterial thromboses more likely to embolize to?**

   A. Brain

   B. Kidneys

   C. Spleen

   D. All of the above

3. **Which of the following is NOT part of Virchow's triad when explaining the causes of a venous thromboembolism (VTE)?**

   A. Stasis of blood flow

   B. Vascular endothelial injury

   C. Hypocoagulable state

   D. Hypercoagulable state

4. **Which of the following is NOT typically associated with a Carotid Artery TIA?**

   A. Contralateral hand/arm weakness

   B. Contralateral sensory loss

   C. Ipsilateral Amaurosis fugax

   D. Bilateral vision loss

5. **Which type of diabetes is related to autoimmune destruction of insulin-producing beta cells?**

   A. Type 1 diabetes

   B. Type 2 diabetes

   C. Gestational diabetes

   D. Latent autoimmune diabetes in adults (LADA)

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6. Which of the following benign skin lesions are typically associated with hyperlipidemia?

A. Seborrheic keratosis

B. Keratoacanthoma

C. Papilloma

D. Xanthelasma

7. What type of inflammation is primarily seen in Reactive Arthritis?

A. Granulomatous

B. Serous

C. Purulent

D. Non-granulomatous

8. The Argyll Robertson pupil is a known complication of Syphilis and is associated with which phase of the infection?

A. Primary phase

B. Secondary phase

C. Tertiary phase

D. Latent phase

9. Which condition can cause a cherry red spot that must be differentiated from CRAO?

A. Central retinal vein occlusion

B. Tay-Sachs disease

C. Diabetic retinopathy

D. Age-related macular degeneration

10. What is the primary symptom of Tay-Sachs disease?

A. Cognitive delay

B. Cherry red spot

C. Ocular ischemic syndrome

D. Blurred vision

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Answers

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

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Explanations

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1. What type of tumor is seen in the background of Sturge Weber Syndrome?

A. Oligodendroglioma

B. Astrocytic hamartoma

C. Meningioma

D. Neuroblastoma

Sturge-Weber syndrome is a neurological disorder characterized by a facial capillary malformation, or "port-wine stain," and associated neurological issues due to leptomeningeal angiomas. The type of tumor commonly seen in the context of Sturge-Weber syndrome is the astrocytic hamartoma. Astrocytic hamartomas are benign tumors composed of astrocytes, which are star-shaped glial cells in the brain and spine. In the case of Sturge-Weber syndrome, these hamartomas are typically found in the cortex of the brain on the same side as the facial port-wine stain, and they can lead to seizures and other neurological deficits. This connection between the vascular malformations characteristic of Sturge-Weber syndrome and the presence of astrocytic hamartomas underlines the relationship between the syndrome and the altered development of brain tissue linked to the vascular lesions. Understanding this relationship highlights the unique manifestations and neurological complications in patients with this syndrome.

2. Where are arterial thromboses more likely to embolize to?

A. Brain

B. Kidneys

C. Spleen

D. All of the above

Arterial thromboses can break off and travel through the bloodstream, which is known as embolization. The locations where these emboli can lodge are dependent on factors such as the size of the embolus and the distribution patterns of blood supply in the body. The brain is a common site for embolic strokes, particularly when a thrombosis originates from structures such as the heart or carotid arteries. This is critical because cerebral arterial occlusion can lead to significant neurological deficits. The kidneys are also a destination for emboli, particularly due to their vascular structure and the fact that they receive a substantial portion of cardiac output. An embolus can obstruct renal arteries, leading to renal infarction, which can impact kidney function. The spleen can similarly be affected by emboli arising from arterial sources. Splenic emboli can occur following a thrombus originating from the heart or other areas of the vascular system, potentially causing splenic infarction. Since emboli can travel to the brain, kidneys, or spleen, the assertion that arterial thromboses are likely to embolize to all these sites is accurate, making the choice that includes all of the above the correct answer. Each of these organs is susceptible to complications resulting from embolic events, thus highlighting

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3. Which of the following is NOT part of Virchow's triad when explaining the causes of a venous thromboembolism (VTE)?

A. Stasis of blood flow

B. Vascular endothelial injury

C. Hypocoagulable state

D. Hypercoagulable state

Virchow's triad consists of three key factors that contribute to the formation of venous thromboembolism (VTE): stasis of blood flow, vascular endothelial injury, and hypercoagulable states. In this context, stasis of blood flow refers to conditions where blood flow is significantly reduced, leading to increased clot formation. Vascular endothelial injury encompasses damage to the blood vessel lining, which can promote thrombus formation due to exposure of underlying collagen and tissue factor. A hypercoagulable state refers to an increased tendency of the blood to clot, which can arise from various conditions such as certain genetic disorders, malignancy, or prolonged immobilization. The concept of a hypocoagulable state, which suggests a tendency for decreased clot formation or increased bleeding risk, does not align with the mechanisms of VTE as outlined in Virchow's triad. Instead, this state would typically lead to a reduced risk of thrombus development, making it an inappropriate factor in the context of VTE causes. Therefore, this option is accurately identified as not part of Virchow's triad, since it represents a condition opposite to what promotes venous thrombosis.

4. Which of the following is NOT typically associated with a Carotid Artery TIA?

A. Contralateral hand/arm weakness

B. Contralateral sensory loss

C. Ipsilateral Amaurosis fugax

D. Bilateral vision loss

In the context of carotid artery transient ischemic attacks (TIAs), the primary symptomatology is related to the hemisphere of the brain that is supplied by the affected carotid artery. Carotid artery TIAs are characterized by focal neurological deficits that are typically unilateral, meaning they affect one side of the body. Bilateral vision loss (as noted in the correct answer) is not commonly associated with carotid artery TIAs. This is because the blood supply to both visual fields primarily comes from the posterior cerebral arteries, which are not directly affected by carotid artery occlusions. Therefore, when carotid artery circulation is compromised, the resulting symptoms tend to manifest as unilateral deficits rather than bilateral ones. In contrast, contralateral hand/arm weakness and contralateral sensory loss are both classic presentations of TIAs when one hemisphere of the brain is deprived of adequate blood supply due to carotid artery blockage. These symptoms reflect the lateralization of brain function, where one side of the brain controls the opposite side of the body. Ipsilateral amaurosis fugax, which is transient vision loss in one eye due to retinal ischemia, clearly ties in with the carotid arterial supply since the retina is fed by the central retinal artery, a

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5. Which type of diabetes is related to autoimmune destruction of insulin-producing beta cells?

A. Type 1 diabetes

B. Type 2 diabetes

C. Gestational diabetes

D. Latent autoimmune diabetes in adults (LADA)

Type 1 diabetes is characterized by the autoimmune destruction of the insulin-producing beta cells in the pancreas. This process results in little to no insulin production, which is crucial for regulating blood glucose levels. In Type 1 diabetes, the immune system mistakenly identifies these beta cells as foreign and attacks them, leading to the onset of hyperglycemia when blood glucose levels rise due to the lack of insulin. This form of diabetes typically develops in children and young adults, although it can occur at any age. The knowledge surrounding Type 1 diabetes emphasizes the relationship between autoimmune processes and the destruction of pancreatic function, which distinguishes it from other forms of diabetes. Type 2 diabetes, on the other hand, is primarily associated with insulin resistance and is more related to lifestyle factors and genetics rather than an autoimmune process. Gestational diabetes occurs during pregnancy and typically resolves after childbirth, while latent autoimmune diabetes in adults (LADA) is often considered a slow-progressing form of Type 1 diabetes that manifests in adults, indicating that while it shares characteristics with Type 1 diabetes, it is a different clinical entity.

6. Which of the following benign skin lesions are typically associated with hyperlipidemia?

A. Seborrheic keratosis

B. Keratoacanthoma

C. Papilloma

D. Xanthelasma

Xanthelasma is a type of benign skin lesion that is typically associated with hyperlipidemia. These lesions appear as soft, yellowish plaques that often develop on the eyelids or around the eyes and are caused by lipid deposits in the skin. The presence of xanthelasma often serves as a clinical indicator of underlying lipid disorders, including elevated cholesterol levels, which are part of hyperlipidemia. The other choices refer to different skin lesions that do not have a direct connection to hyperlipidemia. Seborrheic keratosis, for instance, is a common benign growth that is not associated with lipid levels and typically appears as a wart-like lesion. Keratoacanthoma is also a benign tumor that resembles squamous cell carcinoma but is more related to sun exposure than to lipid metabolism. Lastly, papillomas are benign epithelial tumors often related to viral infections, particularly the human papillomavirus (HPV), rather than being linked to lipid levels. In summary, the association of xanthelasma with hyperlipidemia makes it the correct answer, highlighting its role as a potential physical sign of lipid metabolism disorders.

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7. What type of inflammation is primarily seen in Reactive Arthritis?

A. Granulomatous

B. Serous

C. Purulent

D. Non-granulomatous

Reactive arthritis is characterized by non-granulomatous inflammation. This type of inflammation typically occurs as a response to an infection or an insult elsewhere in the body rather than being primarily caused by the presence of a pathogen in the joints themselves. It is often associated with preceding infections, particularly urogenital or gastrointestinal infections, which trigger an autoimmune response leading to joint inflammation. Non-granulomatous inflammation features a more fluid exudate, lymphocyte infiltration, and often presents without the formation of granulomas, which are clusters of immune cells that typically develop in response to chronic inflammation or specific pathogens. Reactive arthritis primarily involves synovial fluid changes and the infiltration of leukocytes, particularly neutrophils and lymphocytes, leading to the inflammation of the joints without forming granulomas. In contrast, granulomatous inflammation is marked by the formation of granulomas, which are not the typical response in reactive arthritis. Types like serous inflammation are characterized by a clear exudate and occur in different inflammatory contexts. Purulent inflammation involves the presence of pus, which is not the predominant feature of reactive arthritis either. Thus, recognizing the unique inflammatory processes in conditions like reactive arthritis helps in understanding its pathogenesis and guiding clinical management.

8. The Argyll Robertson pupil is a known complication of Syphilis and is associated with which phase of the infection?

A. Primary phase

B. Secondary phase

C. Tertiary phase

D. Latent phase

The Argyll Robertson pupil is characterized by pupils that are small and irregular, with the notable feature of being non-reactive to light but reactive to accommodation. This condition is primarily associated with neurosyphilis, which typically occurs during the tertiary phase of syphilis. In the context of this sexually transmitted infection, the tertiary phase can present with various complications, including those affecting the central nervous system. Neurosyphilis may lead to conditions such as tabes dorsalis, which can disrupt the pathways that control pupil size and reaction. This disruption results in the distinctive Argyll Robertson pupil. While the primary phase involves ulcerative lesions (chancre) and the secondary phase includes systemic symptoms like rash and lymphadenopathy, it is the tertiary phase where more severe and chronic complications arise, including those affecting nerve function and pupil reactivity. The latent phase is more about the absence of symptoms following earlier infection stages but does not involve the neurological complications seen in the tertiary stage. Thus, the correct association of the Argyll Robertson pupil with the tertiary phase of syphilis reflects its connection to the complications that arise from effects on the nervous system.

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9. Which condition can cause a cherry red spot that must be differentiated from CRAO?

A. Central retinal vein occlusion

B. Tay-Sachs disease

C. Diabetic retinopathy

D. Age-related macular degeneration

A cherry red spot is a clinical finding characterized by a pale optic disc surrounded by a bright red area in the retina, often indicating a condition that mimics central retinal artery occlusion (CRAO). Tay-Sachs disease is a genetic disorder that typically presents with neurological symptoms and can lead to cherry red spots in the macula due to the accumulation of GM2 gangliosides, especially in young children. In Tay-Sachs disease, the cherry red spot arises as a result of the retinal pigment epithelium being untouched while the inner retinal layers are affected, making it distinctly different from CRAO, where the cherry red spot is seen because the fovea is the last area to be perfused due to its temporal location and increased blood flow. Differentiating between these conditions is crucial as the management and underlying systemic implications vary significantly. While conditions such as central retinal vein occlusion, diabetic retinopathy, and age-related macular degeneration may cause other retinal changes, they are not typically associated with the classic cherry red spot appearance indicative of Tay-Sachs disease.

10. What is the primary symptom of Tay-Sachs disease?

A. Cognitive delay

B. Cherry red spot

C. Ocular ischemic syndrome

D. Blurred vision

Tay-Sachs disease is a genetic disorder resulting from the absence of hexosaminidase A, which leads to the accumulation of GM2 gangliosides in nerve cells. Among the symptoms of this condition, cognitive delay is indeed a primary manifestation. Infants with Tay-Sachs disease typically exhibit normal development for the first few months, but as the condition progresses, they begin to experience cognitive decline, leading to severe developmental delays and regression. While cognitive delay is a significant aspect of the disease, a cherry red spot on the macula is also a recognized characteristic associated with Tay-Sachs and is seen during an eye examination. This feature arises from the accumulation of gangliosides in the retina, leading to a distinct appearance. As such, while cognitive delay is the primary symptom, it is important to recognize that other symptoms, such as the cherry red spot, also play a significant role in diagnosis. Ocular ischemic syndrome and blurred vision, while related to different systemic or ocular conditions, are not primary symptoms of Tay-Sachs disease. Understanding these details enhances comprehension of the disease's clinical presentation and its implications for affected individuals.

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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.

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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