URINARY, HSG, AND VENIPUNCTURE 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. Which statement best describes the IVU's purpose?

A. The kidneys filter contrast medium from the blood and concentrate it in urine

B. The kidneys produce hormones to regulate calcium

C. The kidneys store excess contrast in the bladder

D. The kidneys filter bilirubin from the blood

2. Where are the kidneys located?

A. Retroperitoneal space

B. Intraperitoneal space

C. In the thoracic cavity

D. Within the perinephric space

3. Which statement best describes how contrast is introduced for a cystogram?

A. The contrast is injected into an artery

B. The contrast is swallowed

C. The contrast is administered into a vein intravenously

D. The contrast is introduced directly into the bladder via catheter

4. The opening on the medial border of the kidney is called the

A. Calyx

B. Renal Pelvis

C. Cortex

D. Hilum

5. Which structure is the site of filtration in the nephron?

A. Glomerulus

B. Proximal Convoluted Tube

C. Distal Convoluted Tubule

D. Collecting Duct

6. What anatomy conveys urine to the bladder?

A. The urethra

B. The ureters

C. The kidneys

D. The renal pelvis

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7. What is the most common cause of extravasation?

A. arterial puncture
B. vein spasm
C. inadequate cannulation
D. needle displacement

8. What rotation is used for an oblique cystogram?

A. 0 degrees
B. 20-30 degrees
C. 70-90 degrees
D. 40-60 degrees

9. Where are the ureteric openings located on the bladder?

A. Anterior wall
B. Superior wall
C. Medial wall
D. Posterior lateral surface

10. Which structure transports urine from the kidney to the bladder?

A. Renal Pelvis
B. Ureter
C. Major Calyx
D. Renal Papilla

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Answers

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

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Explanations

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1. Which statement best describes the IVU's purpose?

A. The kidneys filter contrast medium from the blood and concentrate it in urine

B. The kidneys produce hormones to regulate calcium

C. The kidneys store excess contrast in the bladder

D. The kidneys filter bilirubin from the blood

The IVU uses a contrast medium injected into the bloodstream, which the kidneys filter from plasma and then concentrate in the urine. This excreted contrast outlines the kidneys, the collecting system (calyces and renal pelvis), the ureters, and the bladder on radiographs, allowing assessment of both anatomy and excretory function of the urinary tract. The other ideas don't fit because hormone production is an endocrine kidney function not related to imaging, contrast isn't stored in the bladder for imaging and then removed, and bilirubin filtration is a liver-related process, not the purpose of an IVU.

2. Where are the kidneys located?

A. Retroperitoneal space

B. Intraperitoneal space

C. In the thoracic cavity

D. Within the perinephric space

Kidneys sit behind the lining of the abdominal cavity, in the retroperitoneal space. This means they are outside the peritoneal cavity and against the posterior abdominal wall, roughly from the T12 to L3 level, with the right kidney a bit lower due to the liver. The area immediately around each kidney is the perinephric space, enclosed by fascia and fat, but that describes the surrounding compartment rather than the overall location. They are not in the thoracic cavity or inside the peritoneum, which is why the retroperitoneal space is the correct location.

3. Which statement best describes how contrast is introduced for a cystogram?

A. The contrast is injected into an artery

B. The contrast is swallowed

C. The contrast is administered into a vein intravenously

D. The contrast is introduced directly into the bladder via catheter

In a cystogram, the bladder needs to be filled with contrast from inside so its shape and any leaks can be clearly seen. This is achieved by introducing contrast directly into the bladder through a urinary catheter. Direct instillation provides controlled, complete opacification of the bladder wall and surrounding areas, letting you assess for perforation, bladder integrity, and vesicoureteral reflux during the filling process. Injecting contrast into an artery would highlight the vascular system, not the bladder. Swallowing contrast outlines the digestive tract. Intravenous contrast is processed by the kidneys and appears in urine, but it doesn't reliably or safely fill the bladder for detailed visualization, making it harder to evaluate bladder contours.

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4. The opening on the medial border of the kidney is called the

A. Calyx

B. Renal Pelvis

C. Cortex

D. Hilum

The hilum. This is the notch on the kidney's medial border where structures enter and exit the organ—the renal vessels, nerves and lymphatics, and the ureter begin here. The renal pelvis sits at the hilum as the upper part of the ureter that collects urine, and urine then drains through the calyces (minor to major) into that pelvis. The cortex, by contrast, is the outer tissue layer where filtration begins. So the medial-border opening is the hilum, the gateway for vessels and the ureter.

5. Which structure is the site of filtration in the nephron?

A. Glomerulus

B. Proximal Convoluted Tube

C. Distal Convoluted Tubule

D. Collecting Duct

Filtration of blood into the nephron happens at the glomerulus, a tuft of capillaries inside the renal corpuscle. Blood pressure pushes water and small solutes across the filtration barrier—the fenestrated endothelium, the glomerular basement membrane, and the podocyte slit diaphragms—into Bowman's space, forming the filtrate. After this, the filtrate moves into the proximal convoluted tubule where most reabsorption occurs; the distal convoluted tubule and collecting duct mainly adjust composition and water balance through secretion and reabsorption, not filtration. So the glomerulus is the site where filtration from blood into the nephron takes place.

6. What anatomy conveys urine to the bladder?

A. The urethra

B. The ureters

C. The kidneys

D. The renal pelvis

Urine is moved to the bladder by the ureters. These are slender, muscular tubes that extend from the renal pelvis of each kidney down to the bladder, using peristaltic waves to push urine toward the bladder. A one-way mechanism at the point where each ureter meets the bladder helps prevent backflow. The kidneys produce urine and first collect it in the renal pelvis, which funnels it into the ureter, but the actual conduit into the bladder is the ureter, not the kidney or renal pelvis. The urethra is the outlet from the bladder to the exterior, so it doesn't convey urine to the bladder.

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7. What is the most common cause of extravasation?

A. arterial puncture

B. vein spasm

C. inadequate cannulation

D. needle displacement

Extravasation happens when IV fluid leaks into the surrounding tissue. The most common cause is the catheter or needle becoming displaced from the vein; if the cannula loosens or slips out, the infusing fluid can escape into the tissue rather than staying inside the vessel. Keeping the IV line secure, using a stable vein, and regularly checking patency and position helps prevent this. Arterial puncture isn't the mechanism for IV extravasation, since that involves accessing a different vessel and complications there are arterial rather than tissue leakage. Vein spasm may slow or halt flow but doesn't typically cause leakage into surrounding tissue. Inadequate cannulation can lead to poor delivery or infiltration, but displacement remains the more common cause of extravasation.

8. What rotation is used for an oblique cystogram?

A. 0 degrees

B. 20-30 degrees

C. 70-90 degrees

D. 40-60 degrees

Oblique cystograms use an angled projection to separate the bladder and its outlets from the surrounding pelvic bones, giving a clear view of the bladder neck and the ureteral orifices. The 40–60 degree rotation is ideal because it strikes a balance: it tilts the bladder enough to reduce overlapping structures and to visualize the ureteral openings, while avoiding too steep an angle that would push anatomy into a distorted, nearly lateral view. At smaller angles (0–30 degrees) there's still too much overlap with the pubic bones, making it hard to assess the bladder neck and reflux. At very large angles (70–90 degrees) the view becomes almost lateral, which can distort geometry and complicate interpretation. Therefore, 40–60 degrees provides the best balance for an oblique cystogram.

9. Where are the ureteric openings located on the bladder?

A. Anterior wall

B. Superior wall

C. Medial wall

D. Posterior lateral surface

The ureteric openings are located at the posterior lateral angles of the bladder's base, at the posterolateral corners of the trigone. This position forms the ureterovesical junction and supports the valve-like mechanism that helps prevent urine reflux when the bladder fills. Therefore, they sit on the posterior lateral surface, not on the anterior, superior, or medial walls.

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10. Which structure transports urine from the kidney to the bladder?

A. Renal Pelvis

B. Ureter

C. Major Calyx

D. Renal Papilla

Urine is moved from the kidney to the bladder by a muscular tube called the ureter. It begins where the renal pelvis collects urine from the major calyces and transports it downward through the abdomen and into the pelvis, using rhythmic peristaltic contractions of its smooth muscle to push urine toward the bladder. The ureter's distal end enters the bladder with a one-way barrier to help prevent reflux. The other structures are part of the kidney's collecting system. The renal pelvis is the funnel that receives urine from the major calyces and then hands it off to the ureter. The major calyx collects urine from the minor calyces, and the renal papilla is the tip of the renal pyramid where urine exits into a minor calyx. While all are involved in moving urine out of the kidney, the tube that actually transports it to the bladder is the ureter.

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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:

https://urinaryhsgvenipuncture.examzify.com

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

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