Fundamentals of Laparoscopic Surgery (FLS) Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. What is the recommended port separation for intracorporeal knot tying?

A. 5 cm

B. 8 cm

C. 12 cm

D. 10 cm or more

2. Which of the following is an anticipated cardiovascular effect of CO2 pneumoperitoneum that informs prophylaxis?

A. Increased venous stasis due to peritoneal pressure requiring VTE prophylaxis

B. Decreased systemic vascular resistance

C. Hyperkalemia due to acidosis

D. Increased left ventricular ejection fraction

3. Which safety consideration is true for bipolar energy?

A. Activate away from adjacent organs.

B. Activate near critical nerves to monitor energy.

C. Avoid activating the device in close proximity to adjacent organs.

D. Only use in dry tissue.

4. Which of the following is an absolute contraindication to laparoscopy?

A. History of appendectomy

B. Inability to tolerate laparotomy

C. Chronic constipation

D. Controlled hypertension

5. Which of the following is a true statement about using Nitric Oxide as an alternative insufflation gas in laparoscopy?

A. It cannot be used with suspected bowel perforation, but has no other risks.

B. Less acid-base disturbance, improved tolerance in severe cardiopulmonary disease, and less postoperative pain.

C. Causes significant acidosis and increases postoperative pain.

D. It is highly flammable but has no other safety concerns.

6. Which arrhythmia is most commonly associated with pneumoperitoneum during laparoscopic procedures?

A. Bradycardia

B. Sinus tachycardia

C. PVCs

D. Atrial fibrillation

7. What is the most common light source used in laparoscopic procedures?

A. 500W Halogen Lamp

B. 200W LED Lamp

C. 300W Xenon Lamp

D. 100W Xenon Lamp

8. Which statement best describes monopolar coagulation mode?

A. It produces rapid surface heating with shallow necrosis (fulguration); intermittent high-voltage waveform; minimal cutting because heat is dispersed.

B. It produces shallow surface heating with rapid necrosis (fulguration); intermittent waveform with high voltage; significant cutting is not typical because heat is dispersed.

C. It relies on continuous energy delivery with low voltage to achieve coagulation.

D. It uses a damped waveform that minimizes tissue heating.

9. For laparoscopy in small bowel obstruction, which entry method is recommended?

A. Direct visualization entry

B. Gasless laparoscopy

C. Blind entry

D. No entry

10. Which cardiovascular complication related to pneumoperitoneum can be mitigated by certain preoperative medications?

A. Hypertension

B. Nausea

C. Bradyarrhythmias (correct)

D. Hyperglycemia

Answers

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

Explanations

1. What is the recommended port separation for intracorporeal knot tying?

A. 5 cm

B. 8 cm

C. 12 cm

D. 10 cm or more

Having enough distance between the working ports is essential for proper triangulation and room to maneuver during intracorporeal knot tying. When the ports are spaced at least 10 cm apart, the instruments can approach the target tissue from distinct angles, allowing precise needle driving, adequate tissue tension, and a clear view of the knot as it is formed. This reduces external instrument collision, improves control of the knot, and lowers the risk of tissue injury or dropped knots. Distances smaller than this crowd the workspace and limit angulation, making knot tying awkward and less reliable.

2. Which of the following is an anticipated cardiovascular effect of CO2 pneumoperitoneum that informs prophylaxis?

A. Increased venous stasis due to peritoneal pressure requiring VTE prophylaxis

B. Decreased systemic vascular resistance

C. Hyperkalemia due to acidosis

D. Increased left ventricular ejection fraction

CO2 pneumoperitoneum raises intra-abdominal pressure, which compresses abdominal and pelvic veins and reduces venous return from the lower body. This creates venous stasis in the legs, a key factor that increases the risk of deep vein thrombosis during laparoscopy. Because of this stasis, venous thromboembolism prophylaxis (mechanical measures or pharmacologic anticoagulation as appropriate) is guided by the expected cardiovascular effect of the insufflation. The other options don't fit this primary concern: decreased systemic vascular resistance is not the typical result of pneumoperitoneum (vascular resistance often increases with CO2 insufflation due to sympathetic activation); hyperkalemia from acidosis is not a defining or consistent consequence in this context; and an increased left ventricular ejection fraction would not be expected since preload tends to be reduced with higher intra-abdominal pressures.

3. Which safety consideration is true for bipolar energy?

A. Activate away from adjacent organs.

B. Activate near critical nerves to monitor energy.

C. Avoid activating the device in close proximity to adjacent organs.

D. Only use in dry tissue.

Bipolar energy concentrates current between its two tips, so the electrical path—and thus most of the heating—occurs in the tissue between the jaws, which reduces stray current to distant structures. But heat can still spread to nearby organs if the device is activated when it is very close to them. To minimize the risk of thermal injury, avoid activating the device in close proximity to adjacent organs and instead maintain a safe distance, use the lowest effective energy, and apply short activations with good tissue separation. The other options don't capture the central safety rule: energy must not be used near nearby critical structures, and bipolar devices can be used in moist fields, not only in dry tissue.

4. Which of the following is an absolute contraindication to laparoscopy?

A. History of appendectomy

B. Inability to tolerate laparotomy

C. Chronic constipation

D. Controlled hypertension

The key idea is that an absolute contraindication to laparoscopy is a condition in which the patient cannot safely undergo any surgical approach, even the least invasive one, because the stresses of surgery (anesthesia and pneumoperitoneum) cannot be tolerated. If a patient cannot tolerate a laparotomy, they also cannot tolerate laparoscopy, since both procedures require general anesthesia and physiological changes from insufflation. In this scenario, proceeding with laparoscopy would pose an unacceptable risk to the patient, making it an absolute contraindication. History of appendectomy, chronic constipation, and controlled hypertension do not by themselves prevent safely performing laparoscopy. They may be relevant for planning and risks, but they are not absolute barriers.

5. Which of the following is a true statement about using Nitric Oxide as an alternative insufflation gas in laparoscopy?

A. It cannot be used with suspected bowel perforation, but has no other risks.

B. Less acid-base disturbance, improved tolerance in severe cardiopulmonary disease, and less postoperative pain.

C. Causes significant acidosis and increases postoperative pain.

D. It is highly flammable but has no other safety concerns.

Nitric oxide as the gas for pneumoperitoneum brings a different physiological profile than CO_2, which is why the statement about its effects is the best match. CO_2 used during laparoscopy tends to be absorbed into the bloodstream, raising CO_2 levels and shifting the acid-base balance toward acidosis. Using NO for insufflation avoids adding CO_2 load, so acid-base disturbance during and after surgery is less likely, leading to a more stable acid-base status. In patients with severe cardiopulmonary disease, NO's effects on the vasculature can be advantageous. Its properties promote better tissue perfusion and can reduce pulmonary vascular resistance, which helps the heart and lungs cope with the physiological stresses of pneumoperitoneum. This can translate into improved tolerance of the procedure in these high-risk patients. Postoperative pain is often linked to peritoneal irritation and inflammation from the insufflation gas. Nitric oxide may mitigate some of that irritation or inflammatory response, contributing to less postoperative pain compared with CO_2 pneumoperitoneum. Safety considerations are important, but the statement captures the main expected benefits: less acid-base disturbance, better tolerance in patients with cardiopulmonary disease, and reduced postoperative pain.

6. Which arrhythmia is most commonly associated with pneumoperitoneum during laparoscopic procedures?

A. Bradycardia

B. Sinus tachycardia

C. PVCs

D. Atrial fibrillation

When gas is insufflated to create the pneumoperitoneum, several body responses come into play. The rising intra-abdominal pressure reduces venous return and can lower stroke volume, while CO2 absorbed into the bloodstream increases PaCO2, triggering sympathetic stimulation. The combination of these factors raises heart rate as a normal compensatory mechanism to maintain cardiac output. This tendency toward a regular, faster heart rate is sinus tachycardia, making it the most commonly observed arrhythmia during pneumoperitoneum. Bradycardia can occur but is less common and usually related to high insufflation pressures provoking vagal reflexes. PVCs or atrial fibrillation are not typical in the usual intraoperative course without other contributing problems.

7. What is the most common light source used in laparoscopic procedures?

A. 500W Halogen Lamp

B. 200W LED Lamp

C. 300W Xenon Lamp

D. 100W Xenon Lamp

In laparoscopic surgery, illumination must be bright, broad-spectrum, and color-accurate so tissue structures are easy to distinguish through the camera. Xenon arc lamps provide very bright, white light with excellent color rendering, which helps differentiate tissues and vessels under magnification. A 300-watt xenon unit delivers sufficient intensity for lighting deep abdominal cavities without sacrificing image quality, making it the most commonly used setup. Halogen sources tend to run hotter and are less bright, while LEDs are cooler and efficient but have become more common in newer systems; historically, the xenon 300W setup has been the standard for reliable, high-quality visualization.

8. Which statement best describes monopolar coagulation mode?

A. It produces rapid surface heating with shallow necrosis (fulguration); intermittent high-voltage waveform; minimal cutting because heat is dispersed.

B. It produces shallow surface heating with rapid necrosis (fulguration); intermittent waveform with high voltage; significant cutting is not typical because heat is dispersed.

C. It relies on continuous energy delivery with low voltage to achieve coagulation.

D. It uses a damped waveform that minimizes tissue heating.

Monopolar coagulation mode works by delivering energy in bursts of high voltage, so tissue heating occurs in a rapid, superficial way to cause coagulation and desiccation of vessels rather than slicing through tissue. The intermittent waveform heats the tissue enough to seal vessels, but because the energy is dispersed and not continuously aimed at cutting, there isn't significant incision or deep cutting. So you get surface coagulation with shallow necrosis rather than a clean cut.

9. For laparoscopy in small bowel obstruction, which entry method is recommended?

A. Direct visualization entry

B. Gasless laparoscopy

C. Blind entry

D. No entry

Direct visualization entry is favored because, in small bowel obstruction, the abdomen is often distended with dilated loops and adhesions. Entering the abdomen without sight can easily injure bowel or mesentery. Using an open (Hasson) technique or an optical entry under direct visualization lets you see exactly where you enter, avoid looping bowel, and establish safe peritoneal access before placing the trocar. This provides a controlled, safe route to create pneumoperitoneum and proceed with diagnostic or therapeutic laparoscopy. Blind entry is more likely to cause injury, gasless techniques don't guarantee safe access in this setting, and not entering at all would miss the opportunity to treat the obstruction laparoscopically.

10. Which cardiovascular complication related to pneumoperitoneum can be mitigated by certain preoperative medications?

A. Hypertension

B. Nausea

C. Bradyarrhythmias (correct)

D. Hyperglycemia

Pneumoperitoneum with CO2 can trigger a vagal reflex as the peritoneum stretches and intraabdominal pressure rises, leading to bradycardia or bradyarrhythmias. Giving anticholinergic premedication, such as glycopyrrolate or atropine, reduces vagal tone by blocking muscarinic receptors, which blunts this reflex and lowers the likelihood of bradycardia during insufflation. Hypertension, hyperglycemia, and nausea aren't driven by this vagal mechanism in the same way, so they aren't mitigated by these preoperative anticholinergic medications.

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://laparoscopicsurgeryfls.examzify.com

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