

INI CET Surgery

Sample Paper – 2

Duration: 14 Minutes

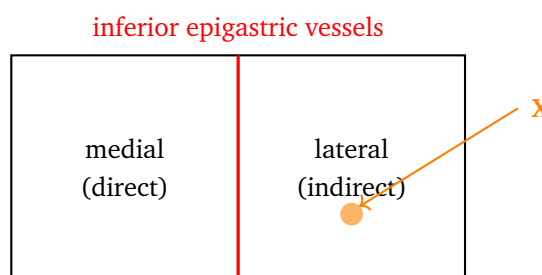
Maximum Marks: 15

Instructions

- This paper contains **15** Multiple Choice Questions (Single Best Response), modelled on the Surgery content of **INI CET** (Institutes of National Importance Combined Entrance Test) conducted by AIIMS New Delhi.
- The **15-question** length matches the number of Surgery items you actually meet in the real 200-question paper.
- Each correct answer carries **+1 mark**. There is **negative marking of one-third (0.33) mark** for every incorrect answer; unattempted questions carry no penalty.
- Every question has **exactly one best answer**. Choose the single most appropriate option.
- Attempt this practice paper in one timed sitting of about **14 minutes**, the pace the real computer-based test demands.

Gastrointestinal Surgery

Q1. In the schematic of the posterior abdominal wall, the inferior epigastric vessels divide the region into a medial and a lateral compartment. An indirect inguinal hernia emerges through the deep (internal) inguinal ring at the point marked **X**. This point lies:



(A) Lateral to the inferior epigastric vessels



- (B) Medial to the inferior epigastric vessels
- (C) Below the pectineal (Cooper's) ligament
- (D) Through the femoral canal

Q2. The Lichtenstein repair, now the standard elective operation for an inguinal hernia, is best described as a:

- (A) Pure tissue (suture-only) Bassini repair
- (B) Tension-free repair using a synthetic (polypropylene) mesh
- (C) Laparoscopic totally extraperitoneal repair without mesh
- (D) Simple herniotomy with high ligation of the sac only

Q3. A direct inguinal hernia protrudes through Hesselbach's (inguinal) triangle. The medial boundary of Hesselbach's triangle is formed by the:

- (A) Lateral border of the rectus abdominis (rectus sheath)
- (B) Inferior epigastric vessels
- (C) Inguinal ligament
- (D) Conjoint tendon

Hepatobiliary and Pancreatic Surgery

Q4. According to Courvoisier's law, in a jaundiced patient a palpably enlarged, non-tender gallbladder makes which cause of biliary obstruction unlikely?

- (A) Carcinoma of the head of the pancreas
- (B) Cholangiocarcinoma of the distal bile duct
- (C) Ampullary (periampullary) carcinoma
- (D) Common bile duct stones (choledocholithiasis)

Q5. A patient has obstructive jaundice with a stone impacted in the common bile duct. The preferred first-line procedure to relieve the obstruction and remove the stone is:



- (A) Immediate open choledocholithotomy with T-tube drainage
- (B) Endoscopic retrograde cholangiopancreatography (ERCP) with sphincterotomy and stone extraction
- (C) Percutaneous transhepatic cholangiography for diagnosis only
- (D) Watchful waiting with oral bile-acid dissolution therapy

Breast and Endocrine Surgery

- Q6.** A 22-year-old woman has a smooth, firm, well-defined, highly mobile and painless breast lump that slips under the examining finger (a “breast mouse”). The most likely diagnosis is:
- (A) Invasive ductal carcinoma
 - (B) Breast abscess
 - (C) Fibrocystic change
 - (D) Fibroadenoma
- Q7.** A lactating woman presents with a tender, warm, erythematous and fluctuant breast lump with fever. After starting antibiotics and confirming a collection, the definitive treatment is:
- (A) Wide local excision of the quadrant
 - (B) Incision and drainage (or ultrasound-guided needle aspiration) of the pus
 - (C) Simple mastectomy
 - (D) Observation alone with continued antibiotics

Trauma and Critical Care

- Q8.** The table compares the classes of haemorrhagic shock. A trauma patient with an estimated 30-40% blood loss, heart rate above 120/min, a low blood pressure and markedly reduced urine output corresponds to the class marked **X**. This is:



X
↓

Class I	Class II	Class III	Class IV
<15%	15-30%	30-40%	>40%
HR <100	100-120	>120	>140
BP normal	normal	low	very low

- (A) Class I
- (B) Class II
- (C) Class III
- (D) Class IV

Q9. Under the ATLS protocol, the recommended initial fluid for resuscitating a patient in haemorrhagic (hypovolaemic) shock is:

- (A) 5% dextrose in water
- (B) Warmed isotonic crystalloid (Ringer's lactate or normal saline)
- (C) 0.45% (half-normal) saline
- (D) Fresh frozen plasma alone

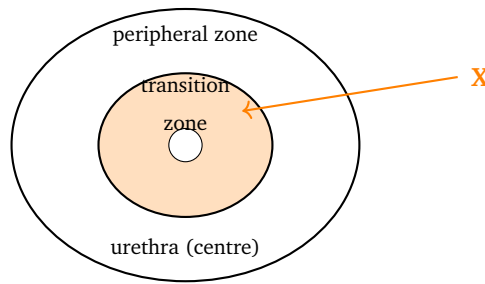
Q10. A trauma patient with ongoing haemorrhage does not respond to the initial crystalloid bolus. The next step in resuscitation is to give:

- (A) Blood (packed red cells; in massive transfusion, a balanced ratio with plasma and platelets)
- (B) Further large volumes of 5% dextrose
- (C) Colloid solution continued indefinitely without blood
- (D) No further fluid until the blood pressure normalises on its own

Urology and Vascular Surgery

Q11. The prostate diagram shows its zones around the urethra. Benign prostatic hyperplasia (BPH), which causes lower urinary tract symptoms, characteristically arises from the zone marked X. This is the:





- (A) Transition (periurethral) zone
- (B) Peripheral zone
- (C) Central zone
- (D) Anterior fibromuscular stroma

Q12. Which statement about the prostate is correct?

- (A) Benign prostatic hyperplasia is a premalignant lesion that inevitably progresses to carcinoma
- (B) Prostate carcinoma most commonly arises in the transition zone
- (C) Prostate-specific antigen (PSA) can be raised in both BPH and prostate cancer, and the cancer most often arises in the peripheral zone
- (D) Transurethral resection of the prostate (TURP) is the standard curative operation for prostate carcinoma

Surgical Oncology and Miscellaneous

Q13. In surgical oncology, an “R0 resection” means:

- (A) Macroscopic (grossly visible) residual tumour is left behind
- (B) Microscopic tumour is present at the cut margin
- (C) Only debulking of the tumour has been performed
- (D) Complete resection with no residual tumour and microscopically clear (negative) margins

Q14. The sentinel lymph node is best defined as:

- (A) The largest lymph node found in the nodal basin
- (B) Any palpable node removed during the operation



- (C) The first node (or nodes) to which lymph drains from the primary tumour
- (D) A node that always contains metastatic tumour

Q15. Sentinel lymph node biopsy, used to avoid an unnecessary full nodal dissection, is most firmly established in the management of which cancers?

- (A) Gastric cancer only
- (B) Lung cancer only
- (C) Breast cancer and cutaneous melanoma
- (D) Colorectal cancer only



Detailed Solutions**Q1.****Solution**

Concept – indirect vs direct hernia and the epigastric vessels: The inferior epigastric vessels are the landmark that separates the two inguinal hernias.

Step 1 – locate the deep ring: The deep (internal) inguinal ring lies **lateral to the inferior epigastric vessels**. An indirect hernia enters here, marked X on the lateral side.

Step 2 – contrast with direct: A direct hernia pushes through the weak posterior wall medial to the vessels, within Hesselbach's triangle.

Why the other options are wrong:

- B, medial: that is the site of a direct hernia, not the deep ring.
- C, below Cooper's ligament: not the deep ring position.
- D, femoral canal: that produces a femoral hernia, below the inguinal ligament.

Final Answer: Lateral to the inferior epigastric vessels ⇒ A

Answer: (A) [Go Back to Q1](#)

Q2.**Solution**

Concept – modern hernia repair: Tension in the repair predicts recurrence.

Step 1 – define Lichtenstein: The Lichtenstein repair is an open, **tension-free repair using a flat polypropylene mesh** to reinforce the posterior wall.

Step 2 – advantage: Because there is no tension on native tissue, recurrence rates are low and it is the standard open technique.

Why the other options are wrong:

- A, Bassini: a pure-tissue suture repair, under tension, with higher recurrence.
- C, laparoscopic TEP: a valid approach but it also uses mesh, and is not the Lichtenstein.
- D, herniotomy alone: adequate in children, not for adult inguinal hernia.

Final Answer: Tension-free mesh repair ⇒ B

Answer: (B) [Go Back to Q2](#)



Q3.

Solution

Concept – Hesselbach’s triangle: Its three borders localise a direct hernia.

Step 1 – name the medial border: The medial boundary is the **lateral border of the rectus abdominis** (the rectus sheath).

Step 2 – complete the triangle: The lateral border is the inferior epigastric vessels and the inferior border is the inguinal ligament.

Why the other options are wrong:

- B, inferior epigastric vessels: that is the lateral border.
- C, inguinal ligament: that is the inferior border.
- D, conjoint tendon: reinforces the wall but is not a defined border of the triangle.

Final Answer: Lateral border of rectus abdominis ⇒ A

Answer: (A) [Go Back to Q3](#)

Q4.

Solution

Concept – Courvoisier’s law: A palpable gallbladder in jaundice carries meaning.

Step 1 – state the law: In obstructive jaundice, a palpable non-tender gallbladder makes **common bile duct stones** an unlikely cause.

Step 2 – reasoning: Chronic stone disease scars and shrinks the gallbladder so it cannot distend; a distensible, palpable gallbladder therefore points to malignant obstruction (e.g. pancreatic head cancer).

Why the other options are wrong:

- A, B, C: pancreatic, biliary and ampullary carcinomas are exactly the malignant causes the law suggests, so they remain likely.

Final Answer: Common bile duct stones ⇒ D

Answer: (D) [Go Back to Q4](#)



Q5.

Solution

Concept – managing a CBD stone: Endoscopy is both diagnostic and therapeutic here.

Step 1 – choose the procedure: ERCP with sphincterotomy and stone extraction is the first-line treatment for a stone in the common bile duct.

Step 2 – follow-up: Once the duct is cleared, an interval cholecystectomy removes the source of further stones.

Why the other options are wrong:

- A, open choledocholithotomy: reserved for failed ERCP or when open surgery is already planned.
- C, PTC only: a diagnostic/drainage route, not the primary treatment for a CBD stone.
- D, watchful waiting: unsafe, as the obstruction risks cholangitis.

Final Answer: ERCP with sphincterotomy and stone extraction ⇒ **B**

Answer: (B) [Go Back to Q5](#)

Q6.

Solution

Concept – benign breast lump in a young woman: Age and feel point to the diagnosis.

Step 1 – match the description: A smooth, firm, very mobile, painless lump in a woman in her twenties is a **fibroadenoma**, the classic “breast mouse”.

Step 2 – confirm: Triple assessment (examination, ultrasound, and needle biopsy if needed) confirms the benign diagnosis.

Why the other options are wrong:

- A, carcinoma: usually a hard, fixed, irregular lump in older women.
- B, breast abscess: tender, warm and fluctuant, usually in lactation.
- C, fibrocystic change: gives lumpy, often tender, cyclical nodularity rather than a discrete mobile lump.

Final Answer: Fibroadenoma ⇒ **D**

Answer: (D) [Go Back to Q6](#)



Q7.

Solution

Concept – breast abscess management: A localised collection of pus needs drainage.

Step 1 – identify the lesion: A tender, warm, fluctuant lump with fever in a lactating woman is a **breast abscess**.

Step 2 – treat: After antibiotics, the definitive step is **incision and drainage**, or repeated ultrasound-guided aspiration for smaller collections.

Why the other options are wrong:

- A, wide local excision: an oncological procedure, not for infection.
- C, mastectomy: far too radical for a benign abscess.
- D, observation alone: antibiotics without drainage rarely clear an established collection.

Final Answer: Incision and drainage (or aspiration) ⇒ **B**

Answer: (B) [Go Back to Q7](#)

Q8.

Solution

Concept – classes of haemorrhagic shock: Blood loss, pulse and pressure define the class.

Step 1 – read the table: 30-40% loss, heart rate above 120, a fallen blood pressure and low urine output correspond to **Class III**, marked X.

Step 2 – implication: Class III (about 1500-2000 mL loss) usually requires blood in addition to crystalloid.

Why the other options are wrong:

- A, Class I: under 15% loss, normal vital signs.
- B, Class II: 15-30% loss, tachycardia but still normal blood pressure.
- D, Class IV: over 40% loss, immediately life-threatening with negligible urine output.

Final Answer: Class III ⇒ **C**

Answer: (C) [Go Back to Q8](#)



Q9.

Solution

Concept – initial resuscitation fluid: Restore the intravascular volume that was lost.

Step 1 – choose the fluid: ATLS recommends a warmed **isotonic crystalloid**, Ringer's lactate or normal saline, as the first fluid.

Step 2 – why isotonic: It stays in the extracellular space and expands the intravascular volume effectively.

Why the other options are wrong:

- A, 5% dextrose: distributes into total body water and is a poor volume expander.
- C, 0.45% saline: hypotonic, unsuitable for resuscitation.
- D, FFP alone: used to correct coagulopathy in massive transfusion, not as the first bolus.

Final Answer: Warmed isotonic crystalloid ⇒ **B**

Answer: (B) [Go Back to Q9](#)

Q10.

Solution

Concept – the non-responder: Persistent bleeding needs oxygen-carrying replacement.

Step 1 – next step: A patient who does not respond to crystalloid should receive **blood** (packed red cells), moving to a balanced ratio with plasma and platelets in massive transfusion.

Step 2 – reason: Crystalloid restores volume but carries no oxygen and dilutes clotting factors, so blood is needed for ongoing loss.

Why the other options are wrong:

- B, more dextrose: worsens dilution and does not carry oxygen.
- C, colloid indefinitely: does not replace red cells or clotting factors.
- D, no further fluid: dangerous in continuing haemorrhage.

Final Answer: Blood (packed red cells) ⇒ **A**

Answer: (A) [Go Back to Q10](#)



Q11.

Solution

Concept – zonal anatomy of the prostate: Different zones give rise to different diseases.

Step 1 – identify X: BPH arises from the **transition (periurethral) zone**, marked X, which surrounds the urethra.

Step 2 – consequence: Enlargement here compresses the urethra and produces the obstructive lower urinary tract symptoms.

Why the other options are wrong:

- B, peripheral zone: the site of most prostate cancers, not BPH.
- C, central zone: surrounds the ejaculatory ducts, rarely the origin of BPH.
- D, anterior fibromuscular stroma: non-glandular tissue.

Final Answer: Transition (periurethral) zone $\Rightarrow$ **A**

Answer: (A) [Go Back to Q11](#)

Q12.

Solution

Concept – BPH versus prostate cancer: Separate the two prostate diseases cleanly.

Step 1 – pick the true statement: PSA can rise in both BPH and prostate cancer, and prostate cancer most often arises in the peripheral zone (option C).

Step 2 – clinical link: Because PSA is not specific, a raised value is interpreted with the examination, imaging and, where needed, biopsy.

Why the other options are wrong:

- A, BPH premalignant: false, BPH does not turn into cancer.
- B, cancer in transition zone: false, cancer is chiefly peripheral (BPH is transition).
- D, TURP curative for cancer: false, TURP treats BPH; radical prostatectomy or radiotherapy treats localised cancer.

Final Answer: PSA raised in both; cancer is peripheral $\Rightarrow$ **C**

Answer: (C) [Go Back to Q12](#)



Q13.

Solution

Concept – residual disease (R) status: The margin defines the completeness of surgery.

Step 1 – define R0: An **R0 resection** means complete removal with no residual tumour and microscopically clear (negative) margins.

Step 2 – contrast: R1 has microscopic tumour at the margin and R2 has grossly visible residual tumour.

Why the other options are wrong:

- A, macroscopic residual: that is R2.
- B, microscopic residual: that is R1.
- C, debulking only: an incomplete, palliative resection, not R0.

Final Answer: Complete resection with clear margins $\Rightarrow$ D

Answer: (D) [Go Back to Q13](#)

Q14.

Solution

Concept – the sentinel node: It is defined by drainage, not by size.

Step 1 – define it: The sentinel lymph node is **the first node (or nodes) to which lymph drains from the primary tumour.**

Step 2 – use: If the sentinel node is free of tumour, the rest of the basin is very likely free too, so a full dissection can be avoided.

Why the other options are wrong:

- A, largest node: size does not define a sentinel node.
- B, any palpable node: not the mapped first-drainage node.
- D, always contains metastasis: false, it may be negative, which is the whole point of biopsy.

Final Answer: First node draining the tumour $\Rightarrow$ C

Answer: (C) [Go Back to Q14](#)



Q15.

Solution

Concept – where sentinel node biopsy is standard: Two tumours defined the technique.

Step 1 – name them: Sentinel lymph node biopsy is most firmly established in **breast cancer and cutaneous melanoma**.

Step 2 – benefit: It spares patients with a negative sentinel node the morbidity (such as lymphoedema) of a full axillary or regional dissection.

Why the other options are wrong:

- A, B, D: gastric, lung and colorectal cancers are staged mainly by formal nodal dissection, not by sentinel node biopsy as a standard of care.

Final Answer: Breast cancer and cutaneous melanoma $\Rightarrow$

Answer: (C) [Go Back to Q15](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	B	3	A	4	D	5	B
6	D	7	B	8	C	9	B	10	A
11	A	12	C	13	D	14	C	15	C

