

INI CET Surgery

Sample Paper – 5

Duration: 14 Minutes

Maximum Marks: 15

Instructions

- This paper contains **15** Multiple Choice Questions (Single Best Response), modelled on the General 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.** The most common site of a perforated peptic ulcer, presenting with sudden severe epigastric pain and gas under the diaphragm, is the:
- (A) Greater curvature of the stomach
 - (B) Posterior wall of the gastric body
 - (C) Anterior wall of the first part of the duodenum
 - (D) Gastric fundus
- Q2.** After a partial gastrectomy, the early dumping syndrome (sweating, palpitations and faintness within minutes of a meal) is caused mainly by:



- (A) Rapid emptying of hyperosmolar chyme into the jejunum with an osmotic fluid shift
- (B) A reactive surge of insulin producing late hypoglycaemia
- (C) Mechanical afferent loop obstruction
- (D) Alkaline bile reflux into the gastric remnant

Q3. The acid-reducing operation for duodenal ulcer that divides only the nerve fibres to the acid-secreting body of the stomach, preserving antral and pyloric innervation so that no drainage procedure is needed, is:

- (A) Truncal vagotomy alone
- (B) Highly selective (proximal gastric) vagotomy
- (C) Billroth II gastrojejunostomy
- (D) Total gastrectomy

Hepatobiliary and Pancreatic Surgery

Q4. Which statement best distinguishes an amoebic liver abscess from a pyogenic one?

- (A) It is typically multiple and confined to the left lobe
- (B) It contains frank pus that grows *Escherichia coli* on culture
- (C) It is usually solitary, sited in the right lobe, with sterile “anchovy sauce” contents
- (D) It is best treated by early open surgical drainage rather than by drugs

Q5. Regarding a hydatid cyst of the liver, which statement is correct?

- (A) It is caused by the protozoan *Entamoeba histolytica*
- (B) Simple percutaneous aspiration is the first-line diagnostic test of choice
- (C) The pathognomonic imaging finding is a single thick-walled cavity with an air-fluid level



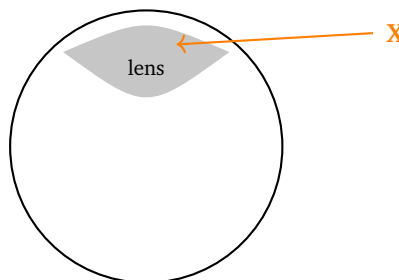
- (D) Surgery must avoid spillage and use a scolical agent, because cyst contents can cause anaphylaxis and recurrence

Breast and Endocrine Surgery

- Q6.** A patient with hypercalcaemia, a raised parathyroid hormone level and renal stones is found to have primary hyperparathyroidism. The most common underlying cause is:
- (A) Parathyroid carcinoma
 - (B) Four-gland parathyroid hyperplasia
 - (C) A solitary parathyroid adenoma
 - (D) Ectopic parathyroid hormone-related peptide from a lung cancer
- Q7.** Before a minimally invasive (focused) parathyroidectomy, the preferred preoperative study to localise a single adenoma is:
- (A) A plain radiograph of the neck
 - (B) A barium swallow study
 - (C) Whole-body FDG PET-CT
 - (D) Technetium-99m sestamibi scintigraphy combined with neck ultrasound

Trauma and Critical Care

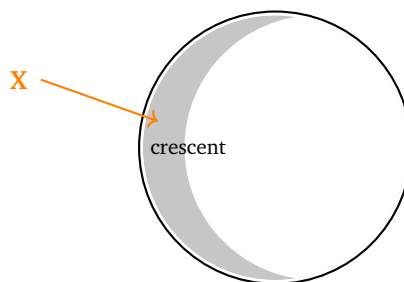
- Q8.** The CT head schematic below shows a biconvex (lens-shaped) hyperdense collection marked X that does not cross the cranial suture lines. After a lucid interval, this appearance is typical of an:



- (A) Acute subdural haematoma

- (B) Subarachnoid haemorrhage
- (C) Extradural (epidural) haematoma
- (D) Intraventricular haemorrhage

Q9. The CT head schematic below shows the crescent-shaped collection marked X that spreads along the brain convexity and crosses suture lines, classically from torn bridging veins. This is a:



- (A) Extradural haematoma
- (B) Subdural haematoma
- (C) Cerebral contusion
- (D) Epidural abscess

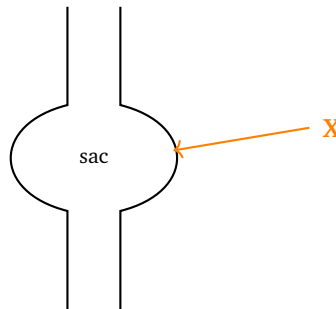
Q10. In a head-injured adult with a falling Glasgow Coma Scale and signs of dangerously raised intracranial pressure, the first-line measures while arranging definitive surgery are to:

- (A) Nurse the head up at about 30 degrees, secure the airway (intubate if GCS is 8 or less) and maintain normal oxygenation and carbon dioxide
- (B) Give a large intravenous fluid bolus to raise the blood pressure well above normal
- (C) Administer a systemic vasodilator to improve cerebral blood flow
- (D) Keep the patient flat and hyperventilate to a very low carbon dioxide level for several hours

Urology and Vascular Surgery



- Q11.** The vessel schematic below shows an abdominal aorta with a focal dilatation marked X. An infrarenal abdominal aorta is defined as aneurysmal once its maximum diameter exceeds:



- (A) 1.5 cm
 - (B) 3 cm
 - (C) 5.5 cm
 - (D) 8 cm
- Q12.** A 70-year-old man presents with sudden severe abdominal and back pain, hypotension and a tender pulsatile abdominal mass. The most likely diagnosis and correct action is:
- (A) A ruptured abdominal aortic aneurysm needing immediate surgical or endovascular repair
 - (B) Renal colic; give analgesia and discharge home
 - (C) Acute pancreatitis; manage conservatively only
 - (D) Diverticulitis; treat with oral antibiotics at home

Surgical Oncology and Miscellaneous

- Q13.** In a surgical patient, “third-space” fluid loss refers to:
- (A) Blood lost externally through an open wound
 - (B) Fluid sequestered into a non-functional compartment such as the bowel lumen, peritoneal cavity or interstitial oedema, and so unavailable to the circulation
 - (C) Insensible water lost from the skin and lungs



(D) Electrolytes lost in the urine

Q14. Total parenteral nutrition (TPN) is best delivered through:

- (A) A central venous line, because the solution is hyperosmolar and would thrombose or damage a peripheral vein
- (B) A small peripheral forearm cannula, for any length of time
- (C) A nasogastric feeding tube
- (D) An intramuscular injection

Q15. The most immediately life-threatening electrolyte disturbance after major surgery or a crush injury, requiring urgent treatment to protect the heart, is:

- (A) Mild hyponatraemia
- (B) Mild hypocalcaemia
- (C) Hypophosphataemia
- (D) Hyperkalaemia



Detailed Solutions

Q1.

Solution

Concept – site of peptic ulcer perforation: Perforation is a surgical emergency, and its location is predictable.

Step 1 – recall the common site: Most perforated peptic ulcers are duodenal.

Step 2 – give the exact spot: They occur on the **anterior wall of the first part (D1) of the duodenum**, which faces the free peritoneal cavity.

Step 3 – link to the sign: Escaping gas rises to give free air under the diaphragm on an erect chest film.

Why the other options are wrong:

- A, greater curvature: an uncommon site of chronic ulcer or perforation.
- B, posterior gastric body: a posterior duodenal ulcer tends to bleed (gastro-duodenal artery) rather than perforate freely.
- D, gastric fundus: not a typical ulcer or perforation site.

Final Answer: Anterior wall of the first part of the duodenum ⇒ C

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

Q2.

Solution

Concept – early versus late dumping: Timing after a meal points to the mechanism.

Step 1 – fix the timing: Early dumping begins within about 15 to 30 minutes of eating.

Step 2 – name the mechanism: A gastric remnant delivers **hyperosmolar chyme rapidly into the jejunum**; water is drawn osmotically into the gut lumen.

Step 3 – explain the symptoms: The fluid shift and gut distension cause cramps, sweating, palpitations and faintness.

Why the other options are wrong:

- B, insulin surge: that is *late* dumping (reactive hypoglycaemia hours after a meal).
- C, afferent loop obstruction: a mechanical complication with bilious vomit-



ing, not early dumping.

- D, bile reflux: causes chronic epigastric pain and gastritis, not the acute post-meal syndrome.

Final Answer: Osmotic fluid shift from rapid gastric emptying ⇒ A

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

Q3.

Solution

Concept – vagotomy for duodenal ulcer: The three vagotomies differ in how much stomach they denervate.

Step 1 – match the description: Dividing only the nerves to the parietal cell mass, while sparing the nerves of Latarjet to the antrum and pylorus, defines a **highly selective (proximal gastric) vagotomy**.

Step 2 – why no drainage is needed: Because antral and pyloric innervation is preserved, gastric emptying stays normal, so no pyloroplasty or gastrojejunostomy is required.

Why the other options are wrong:

- A, truncal vagotomy: denervates the whole stomach and pylorus, so it must be combined with a drainage procedure.
- C, Billroth II: a resection-reconstruction, not an acid-reducing nerve operation.
- D, total gastrectomy: far too radical for a benign ulcer.

Final Answer: Highly selective (proximal gastric) vagotomy ⇒ B

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

Q4.

Solution

Concept – amoebic versus pyogenic liver abscess: Cause, site and contents separate the two.

Step 1 – describe the amoebic abscess: It follows *Entamoeba histolytica* infection and is usually **solitary, in the right lobe**, with sterile reddish-brown “anchovy sauce” fluid.

Step 2 – how it is treated: Metronidazole is first-line; aspiration or drainage is



reserved for large or non-responding lesions.

Why the other options are wrong:

- A, multiple and left-lobe: multiple abscesses favour a pyogenic (biliary or portal) cause.
- B, frank pus growing E. coli: describes a pyogenic abscess, not an amoebic one.
- D, early open drainage: not the primary treatment of an amoebic abscess, which responds to drugs.

Final Answer: Solitary right-lobe abscess with “anchovy sauce” contents ⇒ **C**

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

Q5.

Solution

Concept – hydatid cyst of the liver: It is a parasitic cyst with a real risk of spillage.

Step 1 – pick the correct statement: Surgery (or PAIR) must **avoid spillage and use a scolicalidal agent**, because leaked cyst fluid can trigger anaphylaxis and seed recurrence.

Step 2 – supporting facts: The cause is the tapeworm *Echinococcus granulosus*, and imaging shows daughter cysts with the “water-lily” sign.

Why the other options are wrong:

- A, Entamoeba: that is the cause of an amoebic abscess, not a hydatid cyst.
- B, simple aspiration: uncontrolled aspiration risks anaphylaxis and spillage, so it is avoided as a routine diagnostic test.
- C, air-fluid level in a thick-walled cavity: describes a pyogenic abscess, not a hydatid cyst.

Final Answer: Avoid spillage and use a scolicalidal agent ⇒ **D**

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



Q6.

Solution

Concept – causes of primary hyperparathyroidism: One cause dominates the list.

Step 1 – name it: A **solitary parathyroid adenoma** accounts for roughly 80 to 85 percent of cases.

Step 2 – clinical clue: Autonomous PTH raises serum calcium, producing “stones, bones, abdominal groans and psychic moans”.

Why the other options are wrong:

- A, parathyroid carcinoma: rare (about 1 percent).
- B, four-gland hyperplasia: causes only about 10 to 15 percent, often in MEN syndromes.
- D, ectopic PTHrP from lung cancer: this is humoral hypercalcaemia of malignancy, not primary hyperparathyroidism (PTH is suppressed).

Final Answer: Solitary parathyroid adenoma ⇒ **C**

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

Q7.

Solution

Concept – localising a parathyroid adenoma: Focused surgery needs an accurate preoperative map.

Step 1 – name the study: **Technetium-99m sestamibi scintigraphy with neck ultrasound** is the preferred combination.

Step 2 – why it works: Sestamibi is retained by hyperfunctioning parathyroid tissue, and ultrasound adds anatomical detail, together guiding a minimally invasive resection.

Why the other options are wrong:

- A, plain neck X-ray: shows no soft-tissue parathyroid detail.
- B, barium swallow: images the oesophagus, not the parathyroids.
- C, FDG PET-CT: not the standard first-line localiser for a parathyroid adenoma.

Final Answer: Tc-99m sestamibi scan with ultrasound ⇒ **D**



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

Q8.

Solution

Concept – CT shape of extra-axial bleeds: Shape and suture crossing separate the two collections.

Step 1 – read the figure: The collection marked X is **biconvex (lens-shaped)** and does not cross suture lines.

Step 2 – name it: That is an **extradural (epidural) haematoma**, classically from a torn middle meningeal artery, often after a lucid interval.

Step 3 – why it is limited: The dura is firmly attached at sutures, so the arterial blood cannot spread across them.

Why the other options are wrong:

- A, subdural: crescent-shaped and crosses sutures.
- B, subarachnoid: blood tracks into sulci and cisterns, not a lens.
- D, intraventricular: blood lies within the ventricles.

Final Answer: Extradural (epidural) haematoma ⇒ **C**

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

Q9.

Solution

Concept – crescent collection on CT: The mirror image of the epidural bleed.

Step 1 – read the figure: The collection marked X is **crescent-shaped**, follows the convexity and crosses suture lines.

Step 2 – name it: That is a **subdural haematoma**, classically from torn bridging veins, common in the elderly and in shaking injuries.

Why the other options are wrong:

- A, extradural: biconvex and does not cross sutures.
- C, contusion: a focal patchy parenchymal bruise, not a smooth crescent.
- D, epidural abscess: an infective collection, not the described acute traumatic bleed.

Final Answer: Subdural haematoma ⇒ **B**



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

Q10.

Solution

Concept – first-aid for raised intracranial pressure: Protect the brain while preparing definitive surgery.

Step 1 – pick the first measures: Nurse head-up at about 30 degrees, secure the airway (intubate if the GCS is 8 or less) and keep oxygen and carbon dioxide normal.

Step 2 – why this helps: Head elevation aids venous drainage, while normal oxygenation and normocapnia prevent the vasodilation and swelling that hypoxia or hypercarbia would cause.

Why the other options are wrong:

- B, large fluid bolus: aim for a normal, not a supra-normal, blood pressure; avoid overload.
- C, systemic vasodilator: dilating cerebral vessels can *raise* intracranial pressure.
- D, lie flat and prolonged deep hyperventilation: lying flat worsens venous congestion, and sustained extreme hypocapnia causes harmful ischaemia.

Final Answer: Head-up, airway and normal oxygen/CO₂ ⇒ A

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

Q11.

Solution

Concept – definition of an aortic aneurysm: A threshold diameter defines the term.

Step 1 – read the figure: X marks a focal dilatation of the infrarenal aorta.

Step 2 – give the threshold: An infrarenal aorta is called aneurysmal once its diameter exceeds about **3 cm** (roughly 1.5 times the normal 2 cm).

Why the other options are wrong:

- A, 1.5 cm: below normal aortic calibre.
- C, 5.5 cm: this is the usual *repair* threshold, not the definition of an aneurysm.



- D, 8 cm: a very large aneurysm at high rupture risk, not the defining size.

Final Answer: Diameter exceeding 3 cm $\Rightarrow$ **B**

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

Q12.

Solution

Concept – ruptured abdominal aortic aneurysm: A classic triad flags a surgical emergency.

Step 1 – read the triad: Sudden abdominal and back pain, hypotension and a pulsatile mass point to a **ruptured abdominal aortic aneurysm**.

Step 2 – correct action: This needs **immediate open or endovascular repair**; delay is rapidly fatal from exsanguination.

Why the other options are wrong:

- B, renal colic: does not cause a pulsatile mass and shock; discharging this patient would be lethal.
- C, acute pancreatitis: presents with epigastric pain and raised amylase, not a pulsatile mass.
- D, diverticulitis: left iliac fossa pain and fever, managed very differently.

Final Answer: Ruptured AAA needing immediate repair $\Rightarrow$ **A**

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

Q13.

Solution

Concept – third-space fluid loss: It is fluid that is present but useless.

Step 1 – define it: Third-space loss is **fluid sequestered into a non-functional compartment** such as the bowel lumen, peritoneal cavity or interstitial oedema.

Step 2 – clinical impact: This fluid leaves the effective circulation, so the patient can be hypovolaemic despite a normal total body water; it must be replaced.

Why the other options are wrong:

- A, external blood loss: that is frank haemorrhage, not third-spacing.
- C, insensible loss: water lost from skin and lungs, a different route.
- D, urinary electrolyte loss: renal loss, again not sequestration.



Final Answer: Fluid sequestered into a non-functional compartment $\Rightarrow$ **B**

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

Q14.

Solution

Concept – route for total parenteral nutrition: Solution osmolarity dictates the access.

Step 1 – pick the route: TPN is given through a **central venous line**.

Step 2 – why central: The formula is strongly hyperosmolar, so in a small peripheral vein it would cause thrombophlebitis; a central vein has high blood flow that rapidly dilutes it.

Why the other options are wrong:

- B, peripheral cannula for any duration: only very dilute short-term peripheral nutrition is acceptable, not full TPN.
- C, nasogastric tube: that is enteral feeding, not parenteral.
- D, intramuscular injection: not a route for nutrition.

Final Answer: A central venous line $\Rightarrow$ **A**

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

Q15.

Solution

Concept – most dangerous acute electrolyte problem: One disturbance kills fastest.

Step 1 – name it: **Hyperkalaemia** is the most immediately life-threatening, because a high potassium level causes cardiac arrhythmias and arrest.

Step 2 – link to the setting: Crush injury and tissue breakdown release intracellular potassium, and impaired renal excretion after major surgery worsens it.

Why the other options are wrong:

- A, mild hyponatraemia: usually corrected gradually, not an immediate cardiac threat.
- B, mild hypocalcaemia: causes tetany but is rarely instantly fatal.
- C, hypophosphataemia: causes weakness over time, not sudden arrest.



Final Answer: Hyperkalaemia $\Rightarrow$

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



Answer Key

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

