

INI CET Surgery

Sample Paper – 3

Duration: 14 Minutes

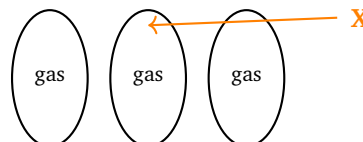
Maximum Marks: 15

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 plain abdominal radiograph schematic shows multiple dilated central loops with valvulae conniventes crossing the full width of the bowel (marked X). This pattern indicates obstruction of the:



- (A) Small bowel
- (B) Large bowel
- (C) Stomach



(D) Rectum

Q2. In an adult presenting to the emergency department, the most common cause of mechanical small bowel obstruction is:

- (A) Postoperative adhesions
- (B) Colorectal carcinoma
- (C) Gallstone ileus
- (D) Intussusception

Q3. A patient with adhesive small bowel obstruction develops continuous pain, tachycardia, fever and localised peritonism. The single most appropriate management is:

- (A) Continue nasogastric decompression and intravenous fluids only
- (B) Oral gastrografen follow-through and discharge
- (C) Urgent exploratory laparotomy for suspected strangulation
- (D) Colonoscopic decompression

Hepatobiliary and Pancreatic Surgery

Q4. Which scoring system, using eleven parameters at admission and at 48 hours, is used to grade the severity of acute pancreatitis?

- (A) Child-Pugh score
- (B) Ranson's criteria
- (C) Alvarado score
- (D) Glasgow coma scale

Q5. In severe acute pancreatitis, the preferred initial management of confirmed infected pancreatic necrosis is:

- (A) Immediate open necrosectomy on day one
- (B) Total pancreatectomy



- (C) Antibiotics with a delayed, step-up (percutaneous drainage first) approach
- (D) Endoscopic sphincterotomy alone

Breast and Endocrine Surgery

- Q6.** The first-line investigation to evaluate a solitary thyroid nodule for malignancy, reported using the Bethesda system, is:
- (A) Serum thyroglobulin
 - (B) Radioiodine uptake scan
 - (C) Fine needle aspiration cytology (FNAC)
 - (D) Core-cut biopsy under general anaesthesia
- Q7.** Which thyroid carcinoma arises from parafollicular C cells, secretes calcitonin, and is a component of MEN 2 syndromes?
- (A) Papillary carcinoma
 - (B) Follicular carcinoma
 - (C) Anaplastic carcinoma
 - (D) Medullary carcinoma

Trauma and Critical Care

- Q8.** In blunt abdominal trauma, the FAST (Focused Assessment with Sonography in Trauma) scan is primarily used to detect:
- (A) Retroperitoneal air
 - (B) Free intraperitoneal fluid (haemoperitoneum)
 - (C) Bowel wall thickening
 - (D) Rib fractures
- Q9.** The most commonly injured solid organ in blunt abdominal trauma is the:
- (A) Pancreas



- (B) Kidney
- (C) Liver
- (D) Spleen

Q10. A haemodynamically stable adult with an isolated low-grade splenic injury on CT and no other indication for surgery is best managed by:

- (A) Non-operative management with close monitoring
- (B) Immediate splenectomy
- (C) Diagnostic peritoneal lavage then discharge
- (D) Exploratory laparotomy with splenorrhaphy in all cases

Urology and Vascular Surgery

Q11. Painless gross haematuria in an adult smoker, with a papillary lesion arising from the urothelial lining of the bladder, is most suggestive of:

- (A) Transitional cell (urothelial) carcinoma
- (B) Squamous cell carcinoma from chronic Schistosoma infection
- (C) Adenocarcinoma of the urachus
- (D) Benign prostatic hyperplasia

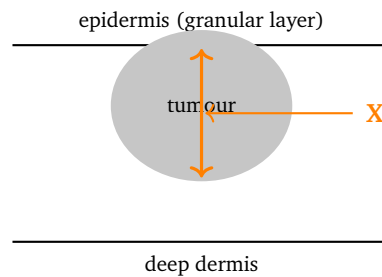
Q12. The initial diagnostic and therapeutic procedure for a non-muscle-invasive bladder tumour is:

- (A) Radical cystectomy
- (B) Transurethral resection of bladder tumour (TURBT)
- (C) External beam radiotherapy alone
- (D) Percutaneous nephrostomy

Surgical Oncology and Miscellaneous

Q13. In the cross-sectional diagram of a cutaneous malignant melanoma, the vertical measurement marked X, from the top of the granular layer to the deepest tumour cell, is the:





- (A) Clark level
- (B) Breslow thickness
- (C) Surgical margin
- (D) Sentinel node depth

Q14. The most common malignant tumour of the skin, which is locally invasive but rarely metastasises, is:

- (A) Malignant melanoma
- (B) Squamous cell carcinoma
- (C) Basal cell carcinoma
- (D) Merkel cell carcinoma

Q15. Which feature most reliably distinguishes a soft tissue sarcoma from a benign lipoma and mandates urgent referral?

- (A) A soft, mobile, long-standing swelling
- (B) A lump smaller than 5 cm that is not growing
- (C) A superficial swelling that transilluminates
- (D) A deep lump larger than 5 cm that is enlarging and firm



Detailed Solutions

Q1.

Solution

Concept – small vs large bowel on plain film: Loop position and mucosal folds separate the two.

Step 1 – read the radiograph: Dilated **central** loops with **valvulae conniventes** that cross the entire lumen indicate **small bowel** obstruction.

Step 2 – contrast: Large bowel loops lie peripherally and show haustra that only partly cross the lumen.

Why the other options are wrong:

- B, large bowel: peripheral loops with haustra, not the central pattern shown.
- C, stomach: a single dilated viscus in the upper abdomen, not multiple loops.
- D, rectum: pelvic, does not give this small-bowel pattern.

Final Answer: Small bowel ⇒

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

Q2.

Solution

Concept – causes of small bowel obstruction: Frequency depends on prior surgery.

Step 1 – name the commonest cause: In adults, **postoperative adhesions** are the leading cause of mechanical small bowel obstruction.

Step 2 – reason: Fibrous bands form after any prior abdominal or pelvic operation and kink the bowel.

Why the other options are wrong:

- B, colorectal carcinoma: the commonest cause of *large* bowel obstruction, not small.
- C, gallstone ileus: a rare cause in the elderly.
- D, intussusception: chiefly a paediatric cause.

Final Answer: Postoperative adhesions ⇒

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



Q3.

Solution

Concept – strangulation is a surgical emergency: Certain signs mean the bowel is losing its blood supply.

Step 1 – read the red flags: Continuous (not colicky) pain, tachycardia, fever and localised peritonism signal **strangulation**.

Step 2 – act: This mandates **urgent exploratory laparotomy** to resect non-viable bowel before perforation.

Why the other options are wrong:

- A, conservative drip-and-suck: appropriate only for simple, non-strangulated obstruction.
- B, gastrografen and discharge: unsafe when strangulation is suspected.
- D, colonoscopic decompression: used for sigmoid volvulus, not strangulated small bowel.

Final Answer: Urgent exploratory laparotomy ⇒ **C**

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

Q4.

Solution

Concept – grading acute pancreatitis: Severity scoring guides intensity of care.

Step 1 – name the score: Ranson’s criteria use five parameters at admission and six more at 48 hours to grade severity.

Step 2 – use: A higher score predicts greater mortality and the need for intensive care.

Why the other options are wrong:

- A, Child-Pugh: grades chronic liver disease.
- C, Alvarado: scores likelihood of acute appendicitis.
- D, Glasgow coma scale: assesses level of consciousness (a different Glasgow from the pancreatitis score).

Final Answer: Ranson’s criteria ⇒ **B**

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



Q5.

Solution

Concept – managing infected pancreatic necrosis: Timing and a graded approach improve survival.

Step 1 – choose the strategy: Modern care uses **antibiotics and a delayed step-up approach**: percutaneous or endoscopic drainage first, escalating to minimally invasive necrosectomy only if needed.

Step 2 – reason: Delaying intervention lets necrosis wall off, and the step-up approach lowers morbidity compared with early open surgery.

Why the other options are wrong:

- A, immediate open necrosectomy on day one: early open surgery carries very high mortality.
- B, total pancreatectomy: not indicated for necrosis.
- D, endoscopic sphincterotomy alone: used for gallstone-obstructed biliary pancreatitis, not to clear necrosis.

Final Answer: Antibiotics with a delayed step-up approach ⇒ **C**

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

Q6.

Solution

Concept – work-up of a thyroid nodule: Cytology guides the decision to operate.

Step 1 – pick the first test: **Fine needle aspiration cytology (FNAC)**, reported by the **Bethesda** system, is the first-line test for malignancy.

Step 2 – use: Bethesda categories stratify the risk and decide who needs surgery.

Why the other options are wrong:

- A, thyroglobulin: a follow-up marker after thyroidectomy, not a diagnostic first test.
- B, radioiodine scan: assesses function (hot vs cold), not cytology.
- D, core-cut biopsy under GA: not the routine first step; FNAC is simpler and outpatient.

Final Answer: Fine needle aspiration cytology ⇒ **C**

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



Q7.

Solution

Concept – types of thyroid carcinoma: Cell of origin defines behaviour and markers.

Step 1 – match the C cells: **Medullary carcinoma** arises from parafollicular C cells, secretes **calcitonin**, and features in MEN 2A and 2B.

Step 2 – implication: It is not iodine-avid, so total thyroidectomy with central node clearance is the treatment.

Why the other options are wrong:

- A, papillary: follicular-cell origin, spreads via lymphatics, best prognosis.
- B, follicular: follicular-cell origin, spreads haematogenously.
- C, anaplastic: undifferentiated, aggressive, elderly patients.

Final Answer: Medullary carcinoma ⇒ **D**

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

Q8.

Solution

Concept – purpose of the FAST scan: A rapid bedside ultrasound in trauma.

Step 1 – state what it detects: FAST looks for **free intraperitoneal fluid (haemoperitoneum)** in the perihepatic, perisplenic, pelvic and pericardial windows.

Step 2 – use: A positive FAST in an unstable patient prompts laparotomy without delay.

Why the other options are wrong:

- A, retroperitoneal air: poorly seen on ultrasound; CT is needed.
- C, bowel wall thickening: not what FAST assesses.
- D, rib fractures: evaluated on X-ray or CT, not FAST.

Final Answer: Free intraperitoneal fluid ⇒ **B**

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



Q9.

Solution

Concept – solid organ injury in blunt trauma: Some organs are hit more often than others.

Step 1 – name the organ: The **spleen** is the most commonly injured solid organ in blunt abdominal trauma.

Step 2 – clue: Left-sided rib fractures and left upper quadrant pain raise suspicion.

Why the other options are wrong:

- A, pancreas: deep and retroperitoneal, injured less often.
- B, kidney: injured, but less commonly than the spleen.
- C, liver: a close second, but the spleen is classically first.

Final Answer: Spleen $\Rightarrow$

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

Q10.

Solution

Concept – spleen-preserving trauma care: Stability, not the scan grade alone, drives the decision.

Step 1 – choose management: A **haemodynamically stable** patient with a low-grade splenic injury is managed **non-operatively** with close monitoring in a high-dependency setting.

Step 2 – reason: Preserving the spleen avoids overwhelming post-splenectomy sepsis.

Why the other options are wrong:

- B, immediate splenectomy: reserved for instability or failed conservative care.
- C, DPL then discharge: outdated and unsafe as a stand-alone plan.
- D, laparotomy in all cases: over-treats stable low-grade injuries.

Final Answer: Non-operative management with monitoring $\Rightarrow$

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



Q11.

Solution

Concept – painless haematuria in a smoker: Urothelial cancer until proven otherwise.

Step 1 – match the picture: Painless gross haematuria with a papillary urothelial lesion points to **transitional cell (urothelial) carcinoma**, strongly linked to smoking.

Step 2 – next step: Cystoscopy and imaging of the upper tracts complete staging.

Why the other options are wrong:

- B, squamous cell carcinoma: linked to chronic schistosomiasis, not the papillary urothelial picture given.
- C, urachal adenocarcinoma: rare, arises at the dome from urachal remnants.
- D, BPH: benign, causes obstructive symptoms rather than a papillary tumour.

Final Answer: Transitional cell carcinoma ⇒ A

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

Q12.

Solution

Concept – managing a non-muscle-invasive bladder tumour: One procedure both diagnoses and treats.

Step 1 – name it: Transurethral resection of bladder tumour (TURBT) removes the lesion and provides tissue for staging.

Step 2 – follow-on: Depth of invasion on the specimen guides intravesical therapy or further surgery.

Why the other options are wrong:

- A, radical cystectomy: reserved for muscle-invasive disease.
- C, radiotherapy alone: not the first step for a resectable superficial tumour.
- D, percutaneous nephrostomy: relieves upper-tract obstruction, not a bladder tumour treatment.

Final Answer: Transurethral resection of bladder tumour ⇒ B

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



Q13.

Solution

Concept – measuring melanoma depth: Depth predicts prognosis.

Step 1 – identify X: The vertical distance from the granular layer to the deepest tumour cell is the **Breslow thickness**.

Step 2 – significance: It is the single most important prognostic factor and guides the width of surgical excision margins.

Why the other options are wrong:

- A, Clark level: describes anatomical layer reached, not a measured thickness, and is less prognostic.
- C, surgical margin: the clearance of normal skin around the excision, not tumour depth.
- D, sentinel node depth: not a defined melanoma measurement.

Final Answer: Breslow thickness $\Rightarrow$

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

Q14.

Solution

Concept – commonest skin cancer: Frequency and metastatic potential differ.

Step 1 – name it: **Basal cell carcinoma** is the most common skin malignancy; it is locally invasive (rodent ulcer) but rarely metastasises.

Step 2 – treatment: Complete local excision is usually curative.

Why the other options are wrong:

- A, malignant melanoma: less common but the most likely to metastasise.
- B, squamous cell carcinoma: second commonest and can metastasise via lymphatics.
- D, Merkel cell carcinoma: rare and aggressive neuroendocrine tumour.

Final Answer: Basal cell carcinoma $\Rightarrow$

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



Q15.

Solution

Concept – red flags for soft tissue sarcoma: Certain lump features demand urgent referral.

Step 1 – pick the red flag: A deep lump larger than 5 cm that is enlarging and firm is the classic sarcoma red flag.

Step 2 – act: Such a lump warrants urgent imaging and referral to a sarcoma unit before any biopsy.

Why the other options are wrong:

- A, soft mobile long-standing swelling: typical of a benign lipoma.
- B, small static lump under 5 cm: low risk of sarcoma.
- C, transilluminating swelling: suggests a cyst, not a solid sarcoma.

Final Answer: A deep lump larger than 5 cm, enlarging and firm ⇒ D

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



Answer Key

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

