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# INI-CET High-Yield Topic Guide

MD / MS | topics that have repeated in past papers

**20**

sessions read  
10 INI-CET + 10 AIIMS PG

**191**

repeated topics  
sorted by subject

**141**

practice questions  
with answer key

A quick look for aspirants attending without full preparation, or giving luck a chance. Topics here have repeated and may repeat again, but there is no guarantee.

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# How to use this guide

## A quick look, not a study plan.

This guide is for aspirants who are attending without full preparation, or who simply want to give luck a chance and glance over what has come up before. The topics and questions here have repeated in earlier papers and may be more likely to repeat, but there is **no guarantee** that any of them will appear.

If you are well prepared, please follow your own plan and revise from your own notes. You do not need this guide, and you do not need to test yourself with the practice set in the last days. Stay calm and trust your preparation.

### 1 Glance at the overview

Two pages show which subjects carry most questions and the 25 topics that came up most often.

### 2 Pick your weaker subjects

Each subject has a table of repeated topics and short one-line facts for the top ones.

### 3 Use the must-know and likely pages

One page lists the core topics seen again and again; another groups topics by how often and how recently they appeared.

### 4 Practice set is optional

Questions modelled on past patterns, with answers and one-line explanations at the end.

## Reading the tables

### Must know

Found in 9 or more of the 20 sessions, or in 5 or more INI-CET sessions.

### Recent

Also found in the 2023 Nov to 2025 sources (these are partial or topic lists).

### x of 10

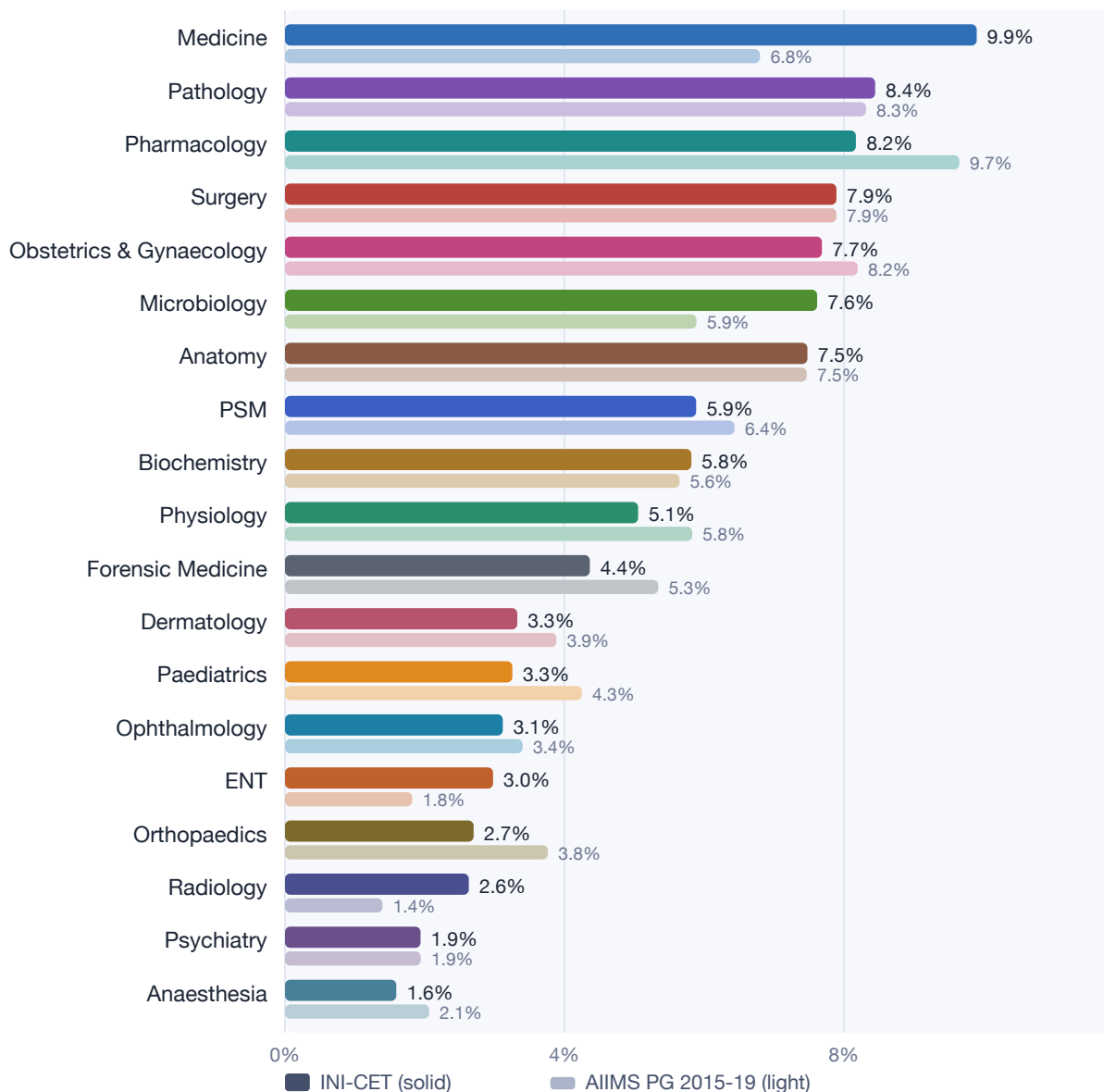
Number of INI-CET sessions (Nov 2020 onwards) and, separately, AIIMS PG sessions (May 2015 to Nov 2019, the earlier exam) in which the topic was found. A topic counts once per session.

## How much to trust the counts

- Built only from compiled papers and recall lists we could read: 6 INI-CET sessions are near-complete, 4 are partial or topic lists only (2023 Nov, 2024, 2024 Jul, 2025 Jul). AIIMS PG papers are full text, but image-based questions could not be matched to a topic.
- Topics were matched by keyword and merged by hand-checked rules, so counts are indicative, not exact. Compiled papers are memory based and may contain errors.
- Past repetition does not guarantee future repetition. Use this as one small input among many.

# At a glance: subjects

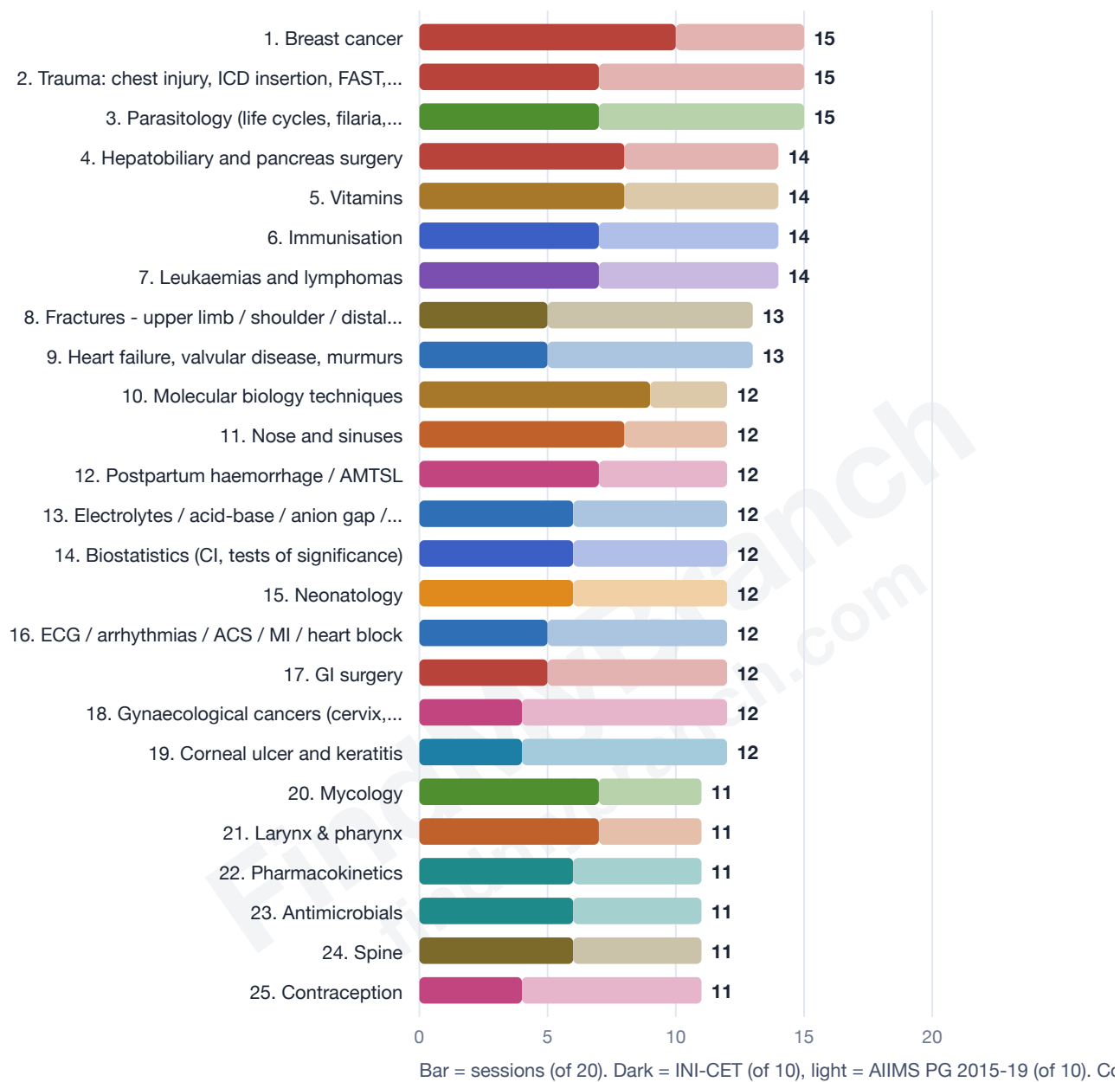
Share of the topics found in each subject across the papers read. Medicine, Pathology, Pharmacology, Surgery and Obstetrics & Gynaecology are the largest blocks.



Shares use distinct topic-instances (image-based questions counted under their paper's subject). Partial sessions weigh less, so read the chart as a guide.

# At a glance: the 25 most repeated topics

Topics found in the most sessions out of 20. Broad topic groups (for example parasitology or hepatobiliary surgery) naturally appear more often than narrow ones.



# What was read

Session labels follow the compiled files; a few are inferred and may be off by a session. Partial and list-only sessions are marked so you can weigh them accordingly.

## INI-CET (Nov 2020 onwards)

| Session           | Coverage        | Items tagged |
|-------------------|-----------------|--------------|
| 2020 Nov          | Full            | 200          |
| 2021 Jul          | Full            | 147          |
| 2021 Nov          | Full            | 135          |
| 2022 May          | Full            | 389          |
| 2022 Nov          | Full            | 772          |
| 2023 May          | Full            | 197          |
| 2023 Nov          | Partial         | 75           |
| 2024 (answer key) | Partial         | 29           |
| 2024 Jul session  | Topic list only | 35           |
| 2025 Jul session  | Topic list only | 136          |

## AIIMS PG (2015 to 2019)

| Session  | Coverage  | Items tagged |
|----------|-----------|--------------|
| May 2015 | Full text | 72           |
| Nov 2015 | Full text | 83           |
| May 2016 | Partial   | 45           |
| Nov 2016 | Full text | 79           |
| May 2017 | Full text | 90           |
| Nov 2017 | Full text | 74           |
| May 2018 | Full text | 97           |
| Nov 2018 | Full text | 78           |
| May 2019 | Full text | 91           |
| Nov 2019 | Full text | 84           |

AIIMS PG was the predecessor exam; INI-CET began in Nov 2020, so the two are shown in separate columns and never added into the INI-CET count.

**Honest limits.** Questions that rely on an image often lose their topic in the compiled text, and recalled papers repeat questions across shifts. We removed repeated questions within and across files and counted each topic once per session. Treat every number as indicative.



# Medicine

9.9% of INI-CET items found | 19 repeated topics | 8 marked must know

| Topic                                                                                                             | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                                   |
|-------------------------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|----------------------------------------------|
| <b>Heart failure, valvular disease, murmurs</b><br><span>Must know</span> <span>Recent</span>                     | 5                | 8                    | <b>13</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 25<br>2015, 16, 17, 18, 19 |
| <b>Electrolytes / acid-base / anion gap / osmotic demyelination</b><br><span>Must know</span> <span>Recent</span> | 6                | 6                    | <b>12</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23, 25<br>2016, 17, 18, 19         |
| <b>ECG / arrhythmias / ACS / MI / heart block</b><br><span>Must know</span>                                       | 5                | 7                    | <b>12</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2015, 16, 17, 18, 19     |
| <b>Connective tissue diseases</b><br><span>Must know</span> <span>Recent</span>                                   | 6                | 4                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23, 25<br>2016, 18, 19             |
| <b>Lung diseases</b><br><span>Must know</span> <span>Recent</span>                                                | 6                | 4                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2016, 17, 18, 19         |
| <b>Hypertension / lipid management / diabetes cardio risk</b><br><span>Must know</span>                           | 3                | 6                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2015, 16, 17, 18                 |
| <b>Stroke / thrombolysis</b>                                                                                      | 4                | 4                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2016, 17, 18                     |
| <b>Infectious diseases</b>                                                                                        | 4                | 3                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 16, 19                 |
| <b>Liver diseases</b>                                                                                             | 3                | 4                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 16, 19                 |
| <b>Adrenal / pituitary / calcium</b><br><span>Must know</span> <span>Recent</span>                                | 5                | 1                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 25<br>2016                     |
| <b>CNS infections / meningitis / encephalitis</b><br><span>Must know</span> <span>Recent</span>                   | 5                | 0                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23, 24, 25<br>-                    |

| Topic                                                            | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20 |                                     | Years seen               |
|------------------------------------------------------------------|------------------|----------------------|-------------------|-------------------------------------|--------------------------|
| <b>Thyroid disorders</b><br><div>Recent</div>                    | 4                | 1                    | 5                 | <div>INI-CET</div> <div>AIIMS</div> | 2020, 22, 25<br>2017     |
| <b>CKD / nephrotic-nephritic syndromes / dialysis / renal...</b> | 2                | 3                    | 5                 | <div>INI-CET</div> <div>AIIMS</div> | 2020, 21<br>2015, 16, 19 |
| <b>Emergency medicine</b>                                        | 0                | 5                    | 5                 | <div>INI-CET</div> <div>AIIMS</div> | -<br>2016, 17, 18, 19    |

5 more topics seen in 4 or more sessions are not listed here.

## High-yield one-liners

### Heart failure, valves, murmurs

5/10 INI-CET · 8/10 AIIMS

- Mitral stenosis: rheumatic in origin; low-pitched mid-diastolic rumble with an opening snap, best heard at the apex in the left lateral position.
- HOCM: autosomal dominant (sarcomere genes); the murmur gets louder with Valsalva and standing, softer with squatting.
- Aortic regurgitation: wide pulse pressure, early diastolic murmur, Austin Flint murmur at the apex.
- HFrEF drugs that improve survival: ACE inhibitor/ARNI, evidence-based beta blockers, MRA, SGLT2 inhibitors.

### Electrolytes and acid-base

6/10 INI-CET · 6/10 AIIMS

- Raise chronic hyponatraemia slowly (about 8 mmol/L or less in 24 h) to avoid osmotic demyelination.
- Anion gap =  $\text{Na} - (\text{Cl} + \text{HCO}_3)$ ; raised in DKA, lactic acidosis, methanol, uraemia; diarrhoea gives a normal gap.
- Hyperkalaemia: IV calcium gluconate protects the heart; insulin-dextrose and salbutamol shift potassium.
- SIADH: euvoelaemic hyponatraemia with inappropriately concentrated urine.

### ECG and arrhythmias

5/10 INI-CET · 7/10 AIIMS

- Atrial fibrillation: irregularly irregular rhythm with no P waves.
- WPW: short PR interval with a delta wave.
- Adenosine terminates AV-nodal re-entrant tachycardia.
- Pulseless VT/VF needs defibrillation; unstable tachycardia with a pulse needs synchronised cardioversion.

### Lung diseases

6/10 INI-CET · 4/10 AIIMS

- COPD is diagnosed by a post-bronchodilator FEV1/FVC below 0.70.
- Long-term oxygen improves survival in COPD with resting PaO<sub>2</sub> of 55 mmHg or less.
- Restrictive disease: reduced FVC with a normal or raised FEV1/FVC ratio.
- Obesity hypoventilation: BMI above 30 with daytime hypercapnia (PaCO<sub>2</sub> above 45 mmHg).

### Connective tissue diseases

6/10 INI-CET · 4/10 AIIMS

- SLE: anti-dsDNA and anti-Smith are specific; anti-dsDNA and low complement track lupus nephritis.
- Systemic sclerosis: anti-Scl-70 (diffuse), anti-centromere (limited, CREST).
- Sjogren syndrome: anti-Ro (SSA) and anti-La (SSB).
- Drug-induced lupus: anti-histone antibodies.

### Stroke

4/10 INI-CET · 4/10 AIIMS

- Non-contrast CT head first, to exclude haemorrhage.
- IV alteplase within 4.5 hours of onset in eligible patients (BP below 185/110 before lysis).
- Mechanical thrombectomy for large-vessel occlusion in selected patients, up to 24 hours.

### Liver diseases

3/10 INI-CET · 4/10 AIIMS

- Hepatic encephalopathy: lactulose first, rifaximin added for recurrence.
- Wilson disease: low ceruloplasmin, Kayser-Fleischer rings, ATP7B gene.
- Primary biliary cholangitis: anti-mitochondrial antibody, treated with ursodeoxycholic acid.

### Endocrine (adrenal, pituitary, calcium)

5/10 INI-CET · 1/10 AIIMS

- Acromegaly: GH not suppressed by an oral glucose load; IGF-1 raised.
- MEN1: parathyroid, pancreatic islet and pituitary tumours; MEN2A: medullary thyroid cancer, pheochromocytoma, parathyroid (RET).
- Hypercalcaemia: primary hyperparathyroidism is commoner in outpatients, malignancy in inpatients.



# Surgery

7.9% of INI-CET items found | 11 repeated topics | 6 marked must know

| Topic                                                                                                              | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                                       |
|--------------------------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|--------------------------------------------------|
| <b>Breast cancer</b><br><span>Must know</span> <span>Recent</span>                                                 | 10               | 5                    | <b>15</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24, 25<br>2015, 16, 17, 18, 19 |
| <b>Trauma: chest injury, ICD insertion, FAST, ATLS</b><br><span>Must know</span> <span>Recent</span>               | 7                | 8                    | <b>15</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 24, 25<br>2016, 17, 18, 19         |
| <b>Hepatobiliary and pancreas surgery</b><br><span>Must know</span> <span>Recent</span>                            | 8                | 6                    | <b>14</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 25<br>2015, 16, 17, 18, 19     |
| <b>GI surgery</b><br><span>Must know</span> <span>Recent</span>                                                    | 5                | 7                    | <b>12</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2015, 16, 17, 18, 19             |
| <b>Thyroid pathology / nodule</b><br><span>Must know</span>                                                        | 4                | 6                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 16, 17, 18, 19             |
| <b>Wound / skin / burns / grafts / ulcers / Marjolin / biopsy...</b><br><span>Must know</span> <span>Recent</span> | 4                | 5                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23<br>2017, 18, 19                     |
| <b>Urology</b>                                                                                                     | 4                | 4                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23<br>2017, 18, 19                     |
| <b>Shock / SIRS / sepsis / fluid resuscitation</b><br><span>Recent</span>                                          | 2                | 5                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 25<br>2015, 16, 17, 18, 19                 |
| <b>Surgical procedures / instruments / sutures / laparoscopy / ...</b>                                             | 2                | 5                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2015, 16, 18, 19                     |
| <b>Peripheral arterial disease / claudication</b><br><span>Recent</span>                                           | 4                | 0                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23, 25<br>-                            |
| <b>Colorectal cancer surgery</b><br><span>Recent</span>                                                            | 3                | 0                    | <b>3</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23, 25<br>-                                |

## High-yield one-liners

### Breast cancer

10/10 INI-CET · 5/10 AIIMS

- Invasive ductal carcinoma (no special type) is the commonest type; HER2-positive disease responds to trastuzumab.
- Peau d'orange (T4b) is skin oedema; inflammatory carcinoma is T4d.
- Tamoxifen raises endometrial cancer risk; BRCA1 is linked to triple-negative cancers.
- Sentinel node biopsy is used for clinically node-negative axilla.

### Trauma and chest injury

7/10 INI-CET · 8/10 AIIMS

- ATLS: airway with cervical spine protection is first (A of ABCDE).
- Tension pneumothorax is a clinical diagnosis: immediate needle decompression, then a chest drain.
- Chest drain goes in the triangle of safety (5th intercostal space, between latissimus dorsi and pectoralis major).
- Massive haemothorax: 1500 mL on drainage or 200 mL/h for 2-4 hours means thoracotomy.

### Hepatobiliary and pancreas

8/10 INI-CET · 6/10 AIIMS

- Charcot triad (fever, jaundice, RUQ pain) = cholangitis; Reynolds pentad adds hypotension and confusion.
- Calot triangle: cystic duct, common hepatic duct and the liver edge; aim for the critical view of safety.
- Courvoisier law: painless jaundice with a palpable gallbladder points to malignancy, not stones.
- Gallbladder carcinoma is linked to gallstones and porcelain gallbladder.

### Gastrointestinal surgery

5/10 INI-CET · 7/10 AIIMS

- Adhesions are the commonest cause of small bowel obstruction.
- Sigmoid volvulus: coffee-bean sign on X-ray.
- GIST: KIT (CD117) positive, treated with imatinib.
- Femoral hernias are commoner in women and strangulate often.

### Thyroid nodule and cancer

4/10 INI-CET · 6/10 AIIMS

- Papillary carcinoma is commonest: Orphan Annie nuclei, psammoma bodies, lymphatic spread.
- Follicular carcinoma is diagnosed by capsular or vascular invasion, not FNAC; it spreads by blood.
- Medullary carcinoma: C cells, calcitonin, amyloid, RET (MEN2).
- Hoarseness after thyroidectomy suggests recurrent laryngeal nerve injury.

### Wounds and burns

4/10 INI-CET · 5/10 AIIMS

- Parkland formula: 4 mL x kg x % TBSA of crystalloid in 24 h, half in the first 8 h.
- Marjolin ulcer is a squamous cell carcinoma arising in a chronic scar.
- Negative-pressure wound therapy uses about -125 mmHg.

## Urology

4/10 INI-CET · 4/10 AIIMS

- Testicular tumour: radical inguinal orchidectomy; never a scrotal approach or FNAC.
- Varicocele is commoner on the left because the left testicular vein drains into the left renal vein.
- Clear cell renal carcinoma is linked to VHL and 3p loss.

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# Obstetrics & Gynaecology

7.7% of INI-CET items found | 17 repeated topics | 7 marked must know

| Topic                                                                                                            | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20 |                                | Years seen                           |
|------------------------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------|--------------------------------|--------------------------------------|
| <b>Postpartum haemorrhage / AMTSL</b><br><span>Must know</span> <span>Recent</span>                              | 7                | 5                    | <b>12</b><br>     | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 24, 25<br>2015, 18, 19 |
| <b>Gynaecological cancers (cervix, endometrium, ovary, DES)</b><br><span>Must know</span>                        | 4                | 8                    | <b>12</b><br>     | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2015, 16, 17, 18, 19     |
| <b>Contraception</b><br><span>Must know</span> <span>Recent</span>                                               | 4                | 7                    | <b>11</b><br>     | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2015, 16, 17, 18     |
| <b>PCOS / infertility / ovulation induction / male infertility</b><br><span>Must know</span> <span>Recent</span> | 4                | 7                    | <b>11</b><br>     | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 23, 25<br>2015, 16, 17, 18, 19 |
| <b>Labour</b><br><span>Must know</span>                                                                          | 4                | 6                    | <b>10</b><br>     | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2015, 16, 17, 18, 19     |
| <b>Primary amenorrhoea / disorders of sexual development</b><br><span>Must know</span> <span>Recent</span>       | 5                | 4                    | <b>9</b><br>      | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2015, 17, 18         |
| <b>Preterm labour</b><br><span>Must know</span> <span>Recent</span>                                              | 5                | 4                    | <b>9</b><br>      | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 24<br>2015, 18, 19         |
| <b>Ectopic pregnancy / early pregnancy</b><br><span>Recent</span>                                                | 4                | 4                    | <b>8</b><br>      | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 24<br>2015, 17, 18     |
| <b>Rh isoimmunisation / hydrops / fetal anomalies / prenatal...</b>                                              | 0                | 8                    | <b>8</b><br>      | <b>INI-CET</b><br><b>AIIMS</b> | -<br>2015, 16, 17, 18, 19            |
| <b>Pre-eclampsia / eclampsia / MgSO4</b><br><span>Recent</span>                                                  | 4                | 2                    | <b>6</b><br>      | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 24<br>2015, 19             |
| <b>Antepartum haemorrhage (placenta previa, abruption) /...</b>                                                  | 3                | 3                    | <b>6</b><br>      | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2016, 18, 19             |

| Topic                                                            | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                                                                       |                  | Years seen               |
|------------------------------------------------------------------|------------------|----------------------|-----------------------------------------------------------------------------------------|------------------|--------------------------|
| Uterine prolapse / pelvic floor surgery / vaginal discharge /... | 2                | 4                    | 6<br> | INI-CET<br>AIIMS | 2021<br>2015, 16, 17, 19 |
| Anatomy of female genital tract / spermatogenesis /...           | 1                | 5                    | 6<br> | INI-CET<br>AIIMS | 2022<br>2016, 17, 18, 19 |
| Diabetes / medical disorders in pregnancy                        | 2                | 3                    | 5<br> | INI-CET<br>AIIMS | 2021, 22<br>2018, 19     |

3 more topics seen in 4 or more sessions are not listed here.

## High-yield one-liners

### Postpartum haemorrhage

7/10 INI-CET · 5/10 AIIMS

- Uterine atony is the commonest cause (the 4 Ts: tone, trauma, tissue, thrombin).
- AMTSL: oxytocin 10 IU IM within a minute of birth, controlled cord traction, uterine massage.
- Carboprost is avoided in asthma; ergometrine is avoided in hypertension.
- Tranexamic acid within 3 hours of birth reduces death from bleeding.

### Gynaecological cancers

4/10 INI-CET · 8/10 AIIMS

- Cervical cancer: HPV 16 and 18; screening by Pap, HPV test or VIA.
- Endometrial cancer: unopposed oestrogen, obesity, Lynch syndrome.
- Ovarian: serous epithelial tumours are commonest; dysgerminoma raises LDH, yolk sac tumour raises AFP.
- In-utero DES exposure causes clear cell adenocarcinoma of the vagina.

### Contraception

4/10 INI-CET · 7/10 AIIMS

- Copper T 380A works for 10 years.
- Levonorgestrel 1.5 mg is licensed within 72 hours of unprotected sex; ulipristal 30 mg works up to 120 hours.
- Pearl index = failures per 100 woman-years.
- Combined pills are avoided in migraine with aura, breast cancer and smokers over 35.

### PCOS and infertility

4/10 INI-CET · 7/10 AIIMS

- Rotterdam criteria: any 2 of oligo-anovulation, hyperandrogenism, polycystic ovaries.
- Letrozole is the first-line ovulation induction drug.
- Lifestyle change and weight loss come first.

### Labour

4/10 INI-CET · 6/10 AIIMS

- Cardinal movements: engagement, descent, flexion, internal rotation, extension, restitution, external rotation.
- Bishop score assesses cervical dilatation, effacement, station, consistency and position.
- Occipito-anterior is the commonest position.

### Preterm labour

5/10 INI-CET · 4/10 AIIMS

- Preterm means before 37 completed weeks.
- Antenatal corticosteroids (24-34 weeks) reduce respiratory distress.
- Magnesium sulphate before 32 weeks gives fetal neuroprotection.
- Nifedipine is the first-line tocolytic.

### Ectopic pregnancy

4/10 INI-CET · 4/10 AIIMS

- Commonest site is the ampulla of the tube.
- Methotrexate is used for stable, unruptured ectopic with low hCG and no cardiac activity.
- Ruptured ectopic with shock needs urgent surgery.

### Pre-eclampsia and eclampsia

4/10 INI-CET · 2/10 AIIMS

- BP 140/90 or more after 20 weeks with proteinuria or end-organ dysfunction.
- Magnesium sulphate prevents and treats eclampsia; loss of the patellar reflex is the first toxicity sign; antidote is calcium gluconate.
- Low-dose aspirin from before 16 weeks in high-risk women.

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# Paediatrics

3.3% of INI-CET items found | 5 repeated topics | 2 marked must know

| Topic                                                                         | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                               |
|-------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|------------------------------------------|
| <b>Neonatology</b><br><span>Must know</span> <span>Recent</span>              | 6                | 6                    | <b>12</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 24, 25<br>2015, 16, 17, 18, 19 |
| <b>Growth &amp; development</b><br><span>Recent</span>                        | 4                | 4                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2016, 17, 18, 19         |
| <b>Congenital heart disease</b><br><span>Must know</span> <span>Recent</span> | 5                | 0                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>-                    |
| <b>Immunization in children</b>                                               | 0                | 4                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | -<br>2017, 18, 19                        |
| <b>Cystic fibrosis</b>                                                        | 3                | 0                    | <b>3</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23<br>-                            |

## High-yield one-liners

### Neonatology

6/10 INI-CET · 6/10 AIIMS

- Neonatal resuscitation: warm, dry, stimulate; positive pressure ventilation for apnoea or heart rate below 100.
- Start chest compressions if the heart rate is below 60 after 30 seconds of good ventilation (3:1).
- Jaundice within 24 hours of birth is pathological.
- Exclusive breastfeeding for the first 6 months; kangaroo mother care for low birth weight.

### Growth and development

4/10 INI-CET · 4/10 AIIMS

- Social smile at about 2 months, head holding at about 3 months.
- Independent walking at about 12-15 months; two-word phrases at about 2 years.

### **Congenital heart disease**

5/10 INI-CET · 0/10 AIIMS

- Tetralogy of Fallot: VSD, pulmonary stenosis, overriding aorta, RV hypertrophy; boot-shaped heart.
- Transposition of the great arteries: egg-on-side heart; cyanotic with increased pulmonary flow.
- Supracardiac TAPVC: snowman sign.
- Prostaglandin E1 keeps the ductus open in duct-dependent lesions.

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# Pathology

8.4% of INI-CET items found | 11 repeated topics | 7 marked must know

| Topic                                                                                                             | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                                   |
|-------------------------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|----------------------------------------------|
| <b>Leukaemias and lymphomas</b><br><span>Must know</span> <span>Recent</span>                                     | 7                | 7                    | <b>14</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24<br>2015, 16, 17, 18, 19 |
| <b>Cell injury / apoptosis / necrosis / autophagy</b><br><span>Must know</span> <span>Recent</span>               | 7                | 3                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 25<br>2015, 18, 19         |
| <b>Genetics - inheritance, imprinting, X-linked, aneuploidy,...</b><br><span>Must know</span> <span>Recent</span> | 5                | 4                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23, 25<br>2015, 18, 19                 |
| <b>Immunology</b><br><span>Must know</span>                                                                       | 6                | 2                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2016                     |
| <b>Anaemia</b><br><span>Must know</span> <span>Recent</span>                                                      | 6                | 2                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2016, 19                 |
| <b>Histiocytosis / mast cell / special stains</b>                                                                 | 4                | 4                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 17, 18                 |
| <b>Haemolytic anaemias</b><br><span>Must know</span> <span>Recent</span>                                          | 5                | 1                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23, 24<br>2019                     |
| <b>Oncogenes / tumour genetics</b><br><span>Must know</span> <span>Recent</span>                                  | 5                | 1                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>2019                     |
| <b>Coagulation disorders</b><br><span>Recent</span>                                                               | 4                | 2                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>2017, 18                 |
| <b>Amyloidosis</b>                                                                                                | 3                | 1                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23<br>2019                             |
| <b>Transfusion medicine</b><br><span>Recent</span>                                                                | 1                | 3                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2023<br>2018, 19                             |

## High-yield one-liners

### Leukaemias and lymphomas

7/10 INI-CET · 7/10 AIIMS

- CML: t(9;22) BCR-ABL, treated with imatinib.
- APL: t(15;17), treated with ATRA; Auer rods in AML.
- Reed-Sternberg cells: CD15 and CD30 positive (classical Hodgkin).
- Burkitt: t(8;14) c-MYC, starry-sky; hairy cell leukaemia: BRAF V600E, TRAP positive.

### Cell injury and death

7/10 INI-CET · 3/10 AIIMS

- Intrinsic apoptosis: BCL2 family, cytochrome c, caspase 9; extrinsic: caspase 8; executioners caspases 3 and 7.
- Caseous necrosis in TB; coagulative necrosis in infarcts (except brain, which is liquefactive).
- Irreversible injury: membrane damage, nuclear pyknosis, karyorrhexis, karyolysis.

### Genetics

5/10 INI-CET · 4/10 AIIMS

- Prader-Willi: paternal 15q11-q13 deletion; Angelman: maternal.
- Trinucleotide repeats: Fragile X (CGG), Huntington (CAG).
- Mitochondrial inheritance is maternal (LHON).

### Immunology

6/10 INI-CET · 2/10 AIIMS

- Type I hypersensitivity is IgE; type II antibody; type III immune complex; type IV T-cell mediated.
- MHC I presents to CD8 cells, MHC II to CD4 cells.
- CD40L deficiency causes hyper-IgM syndrome; BTK defect causes X-linked agammaglobulinaemia.
- C1 esterase inhibitor deficiency causes hereditary angioedema.

### Anaemia

6/10 INI-CET · 2/10 AIIMS

- Iron deficiency: low ferritin, high TIBC; anaemia of chronic disease: low iron, low TIBC, normal or high ferritin, high hepcidin.
- Hepcidin blocks ferroportin, trapping iron in cells.
- Iron is absorbed in the duodenum through DMT1.

### Special stains

4/10 INI-CET · 4/10 AIIMS

- Toluidine blue: mast cells (metachromatic).
- Prussian blue (Perls): iron. PAS: glycogen and fungi.
- Congo red: amyloid, with apple-green birefringence under polarised light.

### Oncogenes and translocations

5/10 INI-CET · 1/10 AIIMS

- t(14;18) BCL2 in follicular lymphoma; t(11;22) EWS-FLI1 in Ewing sarcoma.
- HER2 amplification in breast cancer; N-MYC in neuroblastoma; RET in MEN2.
- p53 loss: Li-Fraumeni syndrome.

### Coagulation disorders

4/10 INI-CET · 2/10 AIIMS

- Haemophilia A: factor VIII, X-linked, prolonged aPTT with normal PT.
- von Willebrand disease is the commonest inherited bleeding disorder.
- Glanzmann: GpIIb/IIIa; Bernard-Soulier: GpIb.



# Pharmacology

8.2% of INI-CET items found | 21 repeated topics | 8 marked must know

| Topic                                                                                | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                           |
|--------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|--------------------------------------|
| <b>Pharmacokinetics</b><br><span>Must know</span> <span>Recent</span>                | 6                | 5                    | <b>11</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>2015, 16, 17, 18 |
| <b>Antimicrobials</b><br><span>Must know</span> <span>Recent</span>                  | 6                | 5                    | <b>11</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>2015, 17, 18, 19 |
| <b>Antiepileptics</b><br><span>Must know</span> <span>Recent</span>                  | 7                | 3                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 25<br>2015, 17, 18 |
| <b>Diabetes mellitus</b><br><span>Must know</span>                                   | 5                | 4                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2016, 17, 19     |
| <b>Antipsychotics</b><br><span>Must know</span>                                      | 5                | 4                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23<br>2015, 17, 18         |
| <b>Autonomic pharmacology</b><br><span>Must know</span> <span>Recent</span>          | 5                | 4                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>2015, 17, 18, 19 |
| <b>Opioids / analgesics / NSAIDs</b><br><span>Must know</span> <span>Recent</span>   | 5                | 4                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 24<br>2017, 18, 19     |
| <b>Antiplatelets and anticoagulants</b>                                              | 3                | 5                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 18, 19         |
| <b>Lithium / mood stabilisers in bipolar disorder</b>                                | 4                | 3                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23<br>2015, 17, 18         |
| <b>Antiretrovirals / HIV drugs / PEP</b>                                             | 4                | 3                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 17, 18         |
| <b>Clinical trials / drug regulation</b><br><span>Recent</span>                      | 3                | 4                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 25<br>2015, 16, 17, 18         |
| <b>Anticancer drugs / targeted therapy / immunotherapy</b><br><span>Must know</span> | 5                | 1                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2017             |

| Topic                           | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                                                                       | Years seen                             |
|---------------------------------|------------------|----------------------|-----------------------------------------------------------------------------------------|----------------------------------------|
| Antiarrhythmics / cardiac drugs | 2                | 4                    | 6<br> | INI-CET 2022<br>AIIMS 2016, 17, 18, 19 |
| Anti-TB drugs                   | 2                | 3                    | 5<br> | INI-CET 2022<br>AIIMS 2016, 17, 18     |

7 more topics seen in 4 or more sessions are not listed here.

## High-yield one-liners

### Pharmacokinetics

6/10 INI-CET · 5/10 AIIMS

- Bioavailability = AUC oral / AUC IV.
- Half-life =  $0.693 \times V_d / \text{clearance}$ ; steady state is reached in about 4-5 half-lives.
- Loading dose depends on volume of distribution; maintenance dose on clearance.
- Phenytoin and alcohol show zero-order (saturation) kinetics at higher doses.

### Antimicrobials

6/10 INI-CET · 5/10 AIIMS

- Beta-lactams block cell wall transpeptidases (PBPs); MRSA has the altered PBP2a (mecA).
- Vancomycin binds D-Ala-D-Ala; rapid infusion causes red man syndrome.
- Imipenem can lower the seizure threshold.
- Ceftriaxone is used for gonorrhoea.

### Antiepileptics

7/10 INI-CET · 3/10 AIIMS

- Carbamazepine: trigeminal neuralgia; HLA-B\*1502 predicts SJS in Asians; hyponatraemia (more with oxcarbazepine).
- Valproate: neural tube defects, hepatotoxicity, hyperammonaemia.
- Phenytoin: gingival hyperplasia, hirsutism, zero-order kinetics.
- Status epilepticus: IV lorazepam first.

### Antipsychotics

5/10 INI-CET · 4/10 AIIMS

- Acute dystonia: treat with a parenteral anticholinergic.
- Neuroleptic malignant syndrome: dantrolene or bromocriptine.
- Clozapine: agranulocytosis (monitor neutrophils); also sialorrhoea.
- Aripiprazole is a partial D2 agonist.

### Autonomic pharmacology

5/10 INI-CET · 4/10 AIIMS

- Fenoldopam: D1 agonist. Mirabegron: beta-3 agonist. Dobutamine: mainly beta-1.
- Atropine is contraindicated in angle-closure glaucoma.
- Neostigmine reverses non-depolarising blockers.

### Antiplatelets and anticoagulants

3/10 INI-CET · 5/10 AIIMS

- Aspirin: irreversible COX-1 inhibition; clopidogrel: irreversible P2Y12 block (prodrug, CYP2C19).
- Warfarin blocks vitamin K epoxide reductase (factors II, VII, IX, X); reverse with vitamin K or PCC.
- Protamine reverses heparin; idarucizumab reverses dabigatran.

## Lithium

4/10 INI-CET · 3/10 AIIMS

- Narrow therapeutic index; usual serum level about 0.6-1.2 mmol/L.
- Toxicity: coarse tremor, vomiting, confusion; chronic use causes nephrogenic DI and hypothyroidism.
- Thiazides, NSAIDs and ACE inhibitors raise lithium levels; Ebstein anomaly in pregnancy.

## Antiretrovirals

4/10 INI-CET · 3/10 AIIMS

- Abacavir: HLA-B\*5701 hypersensitivity.  
Zidovudine: anaemia. Efavirenz: vivid dreams.
- Integrase inhibitors: dolutegravir, raltegravir.  
Enfuvirtide blocks fusion.
- Post-exposure prophylaxis: start within 72 hours, for 28 days.

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# Microbiology

7.6% of INI-CET items found | 15 repeated topics | 3 marked must know

| Topic                                                                                                      | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                                       |
|------------------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|--------------------------------------------------|
| <b>Parasitology (life cycles, filaria, hydatid, malaria)</b><br><span>Must know</span> <span>Recent</span> | 7                | 8                    | <b>15</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24, 25<br>2015, 16, 17, 18, 19 |
| <b>Mycology</b><br><span>Must know</span> <span>Recent</span>                                              | 7                | 4                    | <b>11</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2017, 18, 19                 |
| <b>Staining techniques</b><br><span>Must know</span> <span>Recent</span>                                   | 5                | 5                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2015, 16, 18, 19                 |
| <b>HIV / AIDS-defining illnesses</b>                                                                       | 4                | 4                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2016, 17, 18, 19                     |
| <b>Spirochaetes / rickettsiae / zoonoses</b><br><span>Recent</span>                                        | 3                | 3                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 25<br>2016, 19                         |
| <b>Viral inclusion bodies / viral morphology</b><br><span>Recent</span>                                    | 4                | 1                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23<br>2019                             |
| <b>Sterilisation / disinfection / infection control</b>                                                    | 3                | 2                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22<br>2018, 19                             |
| <b>STIs / genital ulcers</b><br><span>Recent</span>                                                        | 2                | 3                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 25<br>2015, 17                             |
| <b>Hepatitis viruses</b><br><span>Recent</span>                                                            | 4                | 0                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23<br>-                                |
| <b>Immunoglobulin class switching / IgM-IgD</b><br><span>Recent</span>                                     | 4                | 0                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23, 24<br>-                            |
| <b>Bacteriology - Vibrio / Enterobacteriaceae / E. coli...</b><br><span>Recent</span>                      | 2                | 2                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 23<br>2015, 16                             |

| Topic                                                     | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                                                                              | Years seen                                        |
|-----------------------------------------------------------|------------------|----------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Microscopy / culture media / lab methods</b>           | 0                | 4                    | <b>4</b><br> | <b>INI-CET</b> -<br><b>AIIMS</b> 2016, 17, 18, 19 |
| <b>Tuberculosis microbiology</b><br><span>Recent</span>   | 3                | 0                    | <b>3</b><br> | <b>INI-CET</b> 2020, 22, 25<br><b>AIIMS</b> -     |
| <b>Vesicular rash viruses / herpesviruses / VZV / EBV</b> | 3                | 0                    | <b>3</b><br> | <b>INI-CET</b> 2021, 22<br><b>AIIMS</b> -         |

1 more topics seen in 4 or more sessions are not listed here.

## High-yield one-liners

### Parasitology

7/10 INI-CET · 8/10 AIIMS

- Filaria: Wuchereria bancrofti, Culex vector, nocturnal microfilaraemia; treated with DEC.
- Hydatid: Echinococcus granulosus, dog is the definitive host; albendazole cover around surgery or PAIR.
- Enterobius: perianal itching, cellophane tape test.
- P. vivax and P. ovale have hypnozoites, needing primaquine (or tafenoquine) for radical cure.

### Mycology

7/10 INI-CET · 4/10 AIIMS

- Mucor: broad aseptate hyphae, right-angle branching; liposomal amphotericin B plus debridement.
- Aspergillus: septate hyphae branching at 45 degrees; voriconazole.
- Candida krusei is intrinsically fluconazole-resistant; C. auris is multidrug resistant.
- Sporothrix: rose-gardener disease, itraconazole.

### Staining techniques

5/10 INI-CET · 5/10 AIIMS

- ZN stain for M. tuberculosis uses 20% sulphuric acid; M. leprae (Fite-Faraco) uses 5%; Nocardia a weak acid (1%).
- Cryptosporidium, Cyclospora and Cystoisospora: modified acid-fast.
- India ink: Cryptococcus. Albert stain: volutin granules of Corynebacterium diphtheriae.
- GMS and PAS stain fungal hyphae; Congo red does not.

### HIV and AIDS-defining illnesses

4/10 INI-CET · 4/10 AIIMS

- Kaposi sarcoma, non-Hodgkin lymphoma and invasive cervical cancer are AIDS-defining; melanoma is not.
- Cotrimoxazole prophylaxis against Pneumocystis when CD4 is below 200.
- Cryptococcal meningitis and CNS toxoplasmosis occur at low CD4 counts.

### **Viral inclusion bodies**

4/10 INI-CET · 1/10 AIIMS

- Negri bodies: rabies. Owl's eye: CMV. Henderson-Paterson: molluscum.
- Cowdry A: herpes viruses. Guarnieri bodies: vaccinia/variola.
- Koilocytes: HPV. Decoy cells: BK virus.

### **Sterilisation and disinfection**

3/10 INI-CET · 2/10 AIIMS

- Autoclave: 121 C for 15 minutes; the spore indicator is *Geobacillus stearothermophilus*.
- Hot air oven: 160 C for 2 hours. Ethylene oxide for heat-sensitive items.
- Glutaraldehyde 2% is a high-level disinfectant. Alcohol does not kill spores.

### **Sexually transmitted infections**

2/10 INI-CET · 3/10 AIIMS

- Chancroid: painful ulcer, *Haemophilus ducreyi*; syphilis chancre is painless.
- LGV: *Chlamydia trachomatis* L1-L3 with inguinal buboes.
- Jarisch-Herxheimer reaction follows penicillin in syphilis.

### **Hepatitis viruses**

4/10 INI-CET · 0/10 AIIMS

- HBsAg is the first marker; anti-HBc IgM marks the window period; isolated anti-HBs means vaccination.
- HDV needs HBsAg to replicate.
- HEV causes high mortality in pregnancy.

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# Biochemistry

5.8% of INI-CET items found | 9 repeated topics | 5 marked must know

| Topic                                                                                                             | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                                   |
|-------------------------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|----------------------------------------------|
| <b>Vitamins</b><br><span>Must know</span> <span>Recent</span>                                                     | 8                | 6                    | <b>14</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24<br>2015, 16, 17, 18, 19 |
| <b>Molecular biology techniques</b><br><span>Must know</span> <span>Recent</span>                                 | 9                | 3                    | <b>12</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24, 25<br>2015, 18, 19     |
| <b>DNA repair / replication / gene<br/>expression / epigenetics</b><br><span>Must know</span> <span>Recent</span> | 6                | 1                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24<br>2017                 |
| <b>Glycogen metabolism / storage<br/>diseases</b><br><span>Must know</span> <span>Recent</span>                   | 6                | 1                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 24, 25<br>2017                 |
| <b>Enzyme kinetics &amp; inhibition</b><br><span>Must know</span> <span>Recent</span>                             | 5                | 2                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2018, 19                 |
| <b>Ketone bodies / ketosis</b><br><span>Recent</span>                                                             | 4                | 1                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 23<br>2017                         |
| <b>Lipid disorders</b><br><span>Recent</span>                                                                     | 4                | 0                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23<br>-                                |
| <b>Laboratory tubes / vacutainer additives</b><br><span>Recent</span>                                             | 4                | 0                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 23, 24<br>-                            |
| <b>Selenocysteine / trace elements / zinc /<br/>minerals</b><br><span>Recent</span>                               | 3                | 1                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23, 24<br>2015                         |

## High-yield one-liners

### Vitamins

8/10 INI-CET · 6/10 AIIMS

- B12 and folate deficiency: megaloblastic anaemia; B12 raises both methylmalonic acid and homocysteine, folate only homocysteine.
- Vitamin B6: xanthurenic acid after a tryptophan load; isoniazid causes B6 deficiency.
- Vitamin K carboxylates factors II, VII, IX, X and proteins C and S.
- Vitamin D: 25-hydroxylation in liver, 1-alpha hydroxylation in kidney (PTH stimulates).

### Molecular biology techniques

9/10 INI-CET · 3/10 AIIMS

- PCR: denaturation, annealing, extension with Taq polymerase.
- Southern blot: DNA; Northern: RNA; Western: protein.
- Sanger sequencing uses dideoxynucleotides lacking 3' OH.
- Hybridoma technology uses HAT medium and the purine salvage pathway.

### DNA repair and gene expression

6/10 INI-CET · 1/10 AIIMS

- Nucleotide excision repair defect: xeroderma pigmentosum; mismatch repair defect: Lynch syndrome.
- Double-strand breaks: homologous recombination (BRCA1/2) or non-homologous end joining.
- CpG methylation silences genes.

### Glycogen storage diseases

6/10 INI-CET · 1/10 AIIMS

- Von Gierke (I): glucose-6-phosphatase; fasting hypoglycaemia, lactic acidosis, hyperuricaemia.
- Pompe (II): lysosomal acid maltase; cardiomegaly.
- McArdle (V): muscle phosphorylase; exercise intolerance without lactate rise.

### Enzyme kinetics

5/10 INI-CET · 2/10 AIIMS

- $K_m$  is the substrate concentration at half  $V_{max}$ .
- Competitive inhibitor:  $K_m$  up,  $V_{max}$  unchanged. Non-competitive:  $V_{max}$  down,  $K_m$  unchanged.
- Lineweaver-Burk is the double-reciprocal plot.

### Ketone bodies

4/10 INI-CET · 1/10 AIIMS

- Acetoacetate, beta-hydroxybutyrate and acetone; made in liver mitochondria (HMG-CoA synthase).
- The liver cannot use them (no thiophorase).
- Nitroprusside test detects acetoacetate, not beta-hydroxybutyrate.



# Physiology

5.1% of INI-CET items found | 10 repeated topics | 3 marked must know

| Topic                                                                         | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20           |                  | Years seen                       |
|-------------------------------------------------------------------------------|------------------|----------------------|-----------------------------|------------------|----------------------------------|
| <b>Muscle physiology</b><br><span>Must know</span> <span>Recent</span>        | 5                | 3                    | 8<br><div><div></div></div> | INI-CET<br>AIIMS | 2021, 22, 23, 25<br>2015, 17, 19 |
| <b>Action potential / ion channels / RMP / Nernst</b>                         | 3                | 4                    | 7<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 23<br>2015, 16, 17, 18     |
| <b>GI physiology</b><br><span>Must know</span> <span>Recent</span>            | 6                | 0                    | 6<br><div><div></div></div> | INI-CET<br>AIIMS | 2021, 22, 23<br>-                |
| <b>Renal physiology</b><br><span>Must know</span> <span>Recent</span>         | 5                | 1                    | 6<br><div><div></div></div> | INI-CET<br>AIIMS | 2021, 22, 24, 25<br>2018         |
| <b>Cardiovascular physiology</b><br><span>Recent</span>                       | 4                | 2                    | 6<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 23, 25<br>2016, 18         |
| <b>Respiratory physiology</b><br><span>Recent</span>                          | 3                | 3                    | 6<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 25<br>2016, 17, 18         |
| <b>Cell organelles / markers</b><br><span>Recent</span>                       | 2                | 3                    | 5<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 23<br>2016, 18, 19         |
| <b>Oxygen-haemoglobin dissociation curve / 2,3-BPG</b><br><span>Recent</span> | 4                | 0                    | 4<br><div><div></div></div> | INI-CET<br>AIIMS | 2021, 22, 23<br>-                |
| <b>Body fluids / transport mechanisms / insensible water loss /...</b>        | 3                | 1                    | 4<br><div><div></div></div> | INI-CET<br>AIIMS | 2020, 22<br>2015                 |
| <b>Hypoxia types / high altitude / cyanosis</b><br><span>Recent</span>        | 3                | 0                    | 3<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 23, 25<br>-                |

## High-yield one-liners

### Muscle physiology

5/10 INI-CET · 3/10 AIIMS

- On contraction the A band stays constant; the I band and H zone shorten.
- Calcium binds troponin C in skeletal muscle; smooth muscle uses calmodulin and MLCK.

### Action potential

3/10 INI-CET · 4/10 AIIMS

- Resting potential about -70 mV in neurons, -90 mV in skeletal muscle.
- Na<sup>+</sup>/K<sup>+</sup>-ATPase moves 3 Na<sup>+</sup> out and 2 K<sup>+</sup> in.
- Myelinated fibres conduct by saltatory conduction.

### GI physiology

6/10 INI-CET · 0/10 AIIMS

- Gastrin (G cells) stimulates acid; secretin stimulates pancreatic bicarbonate; CCK causes gallbladder contraction.
- Motilin triggers the migrating motor complex.
- The chemoreceptor trigger zone is in the area postrema.

### Renal physiology

5/10 INI-CET · 1/10 AIIMS

- The PCT reabsorbs about two-thirds of filtered sodium and water, and all glucose normally.
- ADH inserts aquaporin-2 in the collecting duct.
- The macula densa senses NaCl for tubuloglomerular feedback.

### Cardiovascular physiology

4/10 INI-CET · 2/10 AIIMS

- Poiseuille: flow is proportional to the fourth power of the radius.
- Cardiac output = heart rate x stroke volume.
- Pulsus alternans suggests left ventricular failure.

### Oxygen-haemoglobin dissociation

4/10 INI-CET · 0/10 AIIMS

- Right shift (Bohr): raised CO<sub>2</sub>, acid, 2,3-BPG and temperature.
- 2,3-BPG binds the beta chains of deoxyhaemoglobin; HbF binds it poorly.
- Left shift: CO, hypothermia, alkalosis.



# Anatomy

7.5% of INI-CET items found | 10 repeated topics | 2 marked must know

| Topic                                                    | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20 |                        | Years seen                             |
|----------------------------------------------------------|------------------|----------------------|-------------------|------------------------|----------------------------------------|
| Rotator cuff / shoulder / upper limb muscles & joints    | 5                | 1                    | 6                 | <div><div></div></div> | INI-CET 2020, 21, 22, 23<br>AIIMS 2017 |
|                                                          | Must know        | Recent               |                   |                        |                                        |
| Trendelenburg sign / superior gluteal nerve              | 5                | 0                    | 5                 | <div><div></div></div> | INI-CET 2021, 22, 23<br>AIIMS -        |
|                                                          | Must know        |                      |                   |                        |                                        |
| Ulnar / median / radial nerve                            | 4                | 0                    | 4                 | <div><div></div></div> | INI-CET 2020, 22, 23<br>AIIMS -        |
| Pelvis/perineum - urethral rupture, pelvic diaphragm,... | 3                | 1                    | 4                 | <div><div></div></div> | INI-CET 2021, 22<br>AIIMS 2017         |
| Cranial foramina / jugular foramen / skull base          | 3                | 1                    | 4                 | <div><div></div></div> | INI-CET 2020, 22<br>AIIMS 2017         |
| Carotid sheath / neck                                    | 0                | 4                    | 4                 | <div><div></div></div> | INI-CET -<br>AIIMS 2015, 17, 19        |
| Intracranial bleed - subdural/epidural vessels           | 3                | 0                    | 3                 | <div><div></div></div> | INI-CET 2020, 22<br>AIIMS -            |
| Embryology - SRY / sex determination / heart development | 3                | 0                    | 3                 | <div><div></div></div> | INI-CET 2022, 23<br>AIIMS -            |
|                                                          | Recent           |                      |                   |                        |                                        |
| Pharyngeal arches / pouches                              | 3                | 0                    | 3                 | <div><div></div></div> | INI-CET 2021, 22<br>AIIMS -            |
| Cerebellum                                               | 3                | 0                    | 3                 | <div><div></div></div> | INI-CET 2020, 21, 22<br>AIIMS -        |

## High-yield one-liners

### Shoulder and upper limb

5/10 INI-CET · 1/10 AIIMS

- Rotator cuff (SITS): supraspinatus, infraspinatus, teres minor, subscapularis; supraspinatus is injured most often.
- Axillary nerve injury follows surgical neck fracture; long thoracic nerve injury gives winged scapula.
- Latissimus dorsi extends, adducts and medially rotates the arm (thoracodorsal nerve).

### Trendelenburg sign

5/10 INI-CET · 0/10 AIIMS

- Superior gluteal nerve supplies gluteus medius and minimus.
- On standing on the affected side the pelvis drops on the opposite side.

### Nerves of the hand

4/10 INI-CET · 0/10 AIIMS

- Ulnar nerve: claw hand and Froment sign (adductor pollicis).
- Median nerve: ape-hand deformity; supplies LOAF muscles.
- Radial nerve: wrist drop. Erb: C5-C6 waiter's tip; Klumpke: C8-T1 claw hand.

### Skull foramina

3/10 INI-CET · 1/10 AIIMS

- Jugular foramen: glossopharyngeal, vagus, accessory nerves and the internal jugular vein origin.
- Foramen rotundum V2; foramen ovale V3; foramen spinosum middle meningeal artery.
- Hypoglossal nerve uses the hypoglossal canal.

### Pelvis and perineum

3/10 INI-CET · 1/10 AIIMS

- Bulbar urethral rupture (straddle injury): extravasation into the superficial perineal pouch.
- Membranous urethral rupture with pelvic fracture: high-riding prostate.
- Posterior division of the internal iliac gives iliolumbar, lateral sacral and superior gluteal arteries.

### Pharyngeal arches and pouches

3/10 INI-CET · 0/10 AIIMS

- Third pouch: thymus and inferior parathyroids; fourth pouch: superior parathyroids.
- DiGeorge: 22q11.2 deletion, third and fourth pouch defects.



# PSM

5.9% of INI-CET items found | 12 repeated topics | 5 marked must know

| Topic                                                                                          | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                                   |
|------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|----------------------------------------------|
| <b>Immunisation</b><br><span>Must know</span> <span>Recent</span>                              | 7                | 7                    | <b>14</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24<br>2015, 16, 17, 18, 19 |
| <b>Biostatistics (CI, tests of significance)</b><br><span>Must know</span> <span>Recent</span> | 6                | 6                    | <b>12</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2015, 17, 18, 19         |
| <b>Study designs</b><br><span>Must know</span> <span>Recent</span>                             | 6                | 4                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 25<br>2015, 16, 17, 19         |
| <b>Screening tests</b><br><span>Must know</span>                                               | 4                | 6                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 16, 17, 18             |
| <b>National health programmes</b><br><span>Must know</span>                                    | 3                | 6                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22<br>2015, 16, 17, 18, 19             |
| <b>Biomedical waste / mercury spill</b>                                                        | 4                | 2                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2017, 18                     |
| <b>Maternal &amp; child health indicators</b><br><span>Recent</span>                           | 4                | 2                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 25<br>2017, 19                 |
| <b>Rabies prophylaxis</b>                                                                      | 4                | 0                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23<br>-                            |
| <b>Levels of prevention / health concepts / models</b>                                         | 3                | 1                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2019                         |
| <b>Health care system / levels of care / PHC planning / medical...</b><br><span>Recent</span>  | 3                | 1                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2016                         |
| <b>Nutrition</b><br><span>Recent</span>                                                        | 2                | 2                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 25<br>2017, 18                         |
| <b>Epidemiology - infectious disease dynamics</b><br><span>Recent</span>                       | 3                | 0                    | <b>3</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 25<br>-                            |

## High-yield one-liners

### Immunisation

7/10 INI-CET · 7/10 AIIMS

- BCG is given intradermally at birth; pentavalent and OPV at 6, 10 and 14 weeks; measles-rubella at 9-12 months.
- Cold-sensitive (spoil if frozen): hepatitis B, DPT, TT, pentavalent; heat-sensitive: OPV, measles, BCG.
- Td replaces TT in adults and pregnancy.

### Biostatistics

6/10 INI-CET · 6/10 AIIMS

- Normal curve: mean  $\pm$  1 SD covers 68%, 2 SD 95%, 3 SD 99.7%.
- 95% CI = mean  $\pm$  1.96 x SE, where SE = SD / square root of n.
- Unpaired t test: two independent means; paired t test: before-after; chi-square: proportions; ANOVA: more than two means.

### Study designs

6/10 INI-CET · 4/10 AIIMS

- Case-control gives the odds ratio; cohort gives relative risk; cross-sectional gives prevalence.
- Attributable risk = incidence in exposed - incidence in unexposed.
- RCT is the best primary design for therapy; systematic reviews rank higher.

### Screening tests

4/10 INI-CET · 6/10 AIIMS

- Sensitivity =  $TP/(TP+FN)$ ; specificity =  $TN/(TN+FP)$ .
- PPV rises and NPV falls as prevalence rises.
- A highly sensitive test rules out disease (SnNout).

### National programmes

3/10 INI-CET · 6/10 AIIMS

- NTEP: TB (Nikshay, DOTS). NLEP: leprosy MDT.
- WHO blindness: vision below 3/60 in the better eye with best correction.

### Biomedical waste

4/10 INI-CET · 2/10 AIIMS

- Yellow: anatomical and infectious waste. Red: contaminated plastics. White translucent: sharps. Blue: glass and metal implants.
- Mercury spill: never use a vacuum cleaner or broom; use sulphur powder or an amalgamating kit.

### Maternal and child health indicators

4/10 INI-CET · 2/10 AIIMS

- MMR: maternal deaths per 100,000 live births. IMR: deaths under 1 year per 1000 live births.
- Neonatal mortality is deaths in the first 28 days.

### Rabies prophylaxis

4/10 INI-CET · 0/10 AIIMS

- Category III exposure: wound wash for 15 minutes, rabies immunoglobulin and vaccine.
- Human RIG 20 IU/kg; equine RIG 40 IU/kg; infiltrate into and around the wound.



# Forensic Medicine

4.4% of INI-CET items found | 10 repeated topics | 6 marked must know

| Topic                                                                                                                 | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                  | Years seen                               |
|-----------------------------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|------------------|------------------------------------------|
| <b>Mechanical injuries / wounds</b><br><span>Must know</span> <span>Recent</span>                                     | 7                | 3                    | <b>10</b><br><div><div></div></div> | INI-CET<br>AIIMS | 2020, 21, 22, 23, 25<br>2015, 18, 19     |
| <b>Medical law / consent / ethics / confidentiality</b><br><span>Must know</span> <span>Recent</span>                 | 5                | 4                    | <b>9</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2020, 21, 22, 24, 25<br>2015, 16, 17, 18 |
| <b>Postmortem changes</b><br><span>Must know</span>                                                                   | 5                | 4                    | <b>9</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2020, 21, 22<br>2017, 18, 19             |
| <b>Heavy metal poisoning</b><br><span>Must know</span> <span>Recent</span>                                            | 6                | 2                    | <b>8</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2020, 21, 22, 23, 25<br>2019             |
| <b>Age estimation / ossification / dental eruption / identification</b><br><span>Must know</span> <span>Recent</span> | 6                | 2                    | <b>8</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2020, 21, 22, 24, 25<br>2018             |
| <b>Asphyxial deaths</b><br><span>Must know</span> <span>Recent</span>                                                 | 6                | 1                    | <b>7</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2020, 21, 22, 23, 25<br>2015             |
| <b>Toxicology - organophosphates / snake &amp; scorpion bite /...</b><br><span>Recent</span>                          | 2                | 3                    | <b>5</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2022, 25<br>2015, 17, 18                 |
| <b>Firearm injuries</b>                                                                                               | 1                | 4                    | <b>5</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2022<br>2016, 17, 19                     |
| <b>Sexual offences / perversions / rape examination</b>                                                               | 2                | 2                    | <b>4</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2022<br>2017, 18                         |
| <b>Poisonous plants</b>                                                                                               | 3                | 0                    | <b>3</b><br><div><div></div></div>  | INI-CET<br>AIIMS | 2020, 22<br>-                            |

## High-yield one-liners

### Mechanical injuries

7/10 INI-CET · 3/10 AIIMS

- Abrasion, contusion, laceration and incised wound are the main types; lacerations have irregular margins with tissue bridging.
- The age of a bruise cannot be fixed reliably from its colour.
- Grievous hurt includes fracture or dislocation of a bone or tooth and hurt causing severe pain for 20 days.

### Medical law and ethics

5/10 INI-CET · 4/10 AIIMS

- MTP: one provider up to 20 weeks; two providers 20-24 weeks for eligible categories.
- POCSO: anyone under 18 is a child; reporting is mandatory.
- Declaration of Helsinki: research ethics; Tokyo: torture.

### Postmortem changes

5/10 INI-CET · 4/10 AIIMS

- Livor mortis begins at 1-2 hours and becomes fixed after about 6-12 hours.
- Rigor mortis: begins in 1-2 hours, maximal by about 12 hours, passes off by about 24-36 hours.
- Cadaveric spasm is instantaneous stiffening at the moment of death.

### Heavy metal poisoning

6/10 INI-CET · 2/10 AIIMS

- Arsenic: garlic odour, Mees lines, rice-water stools; chelate with dimercaprol.
- Lead: Burton line, basophilic stippling, wrist drop.
- Mercury: tremors, erethism, acrodynia.

### Age estimation

6/10 INI-CET · 2/10 AIIMS

- First permanent molar erupts at about 6 years; third molar at 17-25 years.
- The medial end of the clavicle is among the last epiphyses to fuse.
- Fingerprint patterns: arch, loop, whorl; loops are commonest.

### Asphyxial deaths

6/10 INI-CET · 1/10 AIIMS

- Hanging: oblique, incomplete, raised ligature mark above the thyroid cartilage; strangulation: horizontal, complete, at or below it.
- Hyoid fracture is commoner in manual strangulation.
- Judicial hanging: fracture-dislocation of C2-C3.

### Poisons

2/10 INI-CET · 3/10 AIIMS

- Organophosphates: atropine and pralidoxime.
- Elapid venom is neurotoxic; viper venom is haemotoxic (20-minute whole blood clotting test).
- Methanol: formic acid, optic damage; fomepizole or ethanol.



# ENT

3.0% of INI-CET items found | 6 repeated topics | 3 marked must know

| Topic                                                                     | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                                   |
|---------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|----------------------------------------------|
| <b>Nose and sinuses</b><br><span>Must know</span> <span>Recent</span>     | 8                | 4                    | <b>12</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 24, 25<br>2015, 16, 17, 18 |
| <b>Larynx &amp; pharynx</b><br><span>Must know</span> <span>Recent</span> | 7                | 4                    | <b>11</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23, 25<br>2016, 17, 18         |
| <b>Audiology</b><br><span>Recent</span>                                   | 4                | 4                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23<br>2015, 17, 19                 |
| <b>Vertigo / vestibular</b><br><span>Recent</span>                        | 4                | 3                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 25<br>2018, 19                     |
| <b>Otology</b><br><span>Must know</span> <span>Recent</span>              | 5                | 1                    | <b>6</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 24, 25<br>2019                     |
| <b>Auditory pathway</b>                                                   | 4                | 1                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2019                     |

## High-yield one-liners

### Nose and sinuses

8/10 INI-CET · 4/10 AIIMS

- JNA: adolescent boys, profuse epistaxis; do not biopsy.
- Antrochoanal polyp: from the maxillary sinus, unilateral.
- Kiesselbach plexus (Little area) is the commonest site of epistaxis.
- Rhinosporidiosis: strawberry-like mass, treated by excision.

### Larynx and pharynx

7/10 INI-CET · 4/10 AIIMS

- Posterior cricoarytenoid is the only vocal cord abductor.
- Recurrent laryngeal nerve supplies all intrinsic muscles except cricothyroid (external laryngeal nerve).
- Laryngomalacia is the commonest cause of stridor in infants.
- Glottic cancer is commonest; supraglottic spreads early to nodes.

### **Audiology**

4/10 INI-CET · 4/10 AIIMS

- Rinne: air conduction louder than bone conduction in normal ears and in sensorineural loss.
- Weber lateralises to the worse ear in conductive loss and to the better ear in sensorineural loss.
- Tympanogram: As in otosclerosis, B in effusion, C in tubal dysfunction.
- Carhart notch (2 kHz) in otosclerosis; noise-induced loss notches at 4 kHz.

### **Vertigo**

4/10 INI-CET · 3/10 AIIMS

- BPPV: posterior canal commonest; Dix-Hallpike diagnoses, Epley treats.
- Meniere: vertigo, tinnitus, fluctuating sensorineural loss, aural fullness.
- Vestibular neuritis: acute vertigo without hearing loss.

### **Otology**

5/10 INI-CET · 1/10 AIIMS

- Otosclerosis: stapes fixation, treated by stapedotomy.
- Cholesteatoma: attic retraction, unsafe (atticoantral) CSOM.
- Acute otitis media: pneumococcus and Haemophilus influenzae.

### **Auditory pathway**

4/10 INI-CET · 1/10 AIIMS

- Cochlear nuclei, superior olive, lateral lemniscus, inferior colliculus, medial geniculate body, cortex.
- Primary auditory cortex: Heschl's gyrus (areas 41 and 42).

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# Ophthalmology

3.1% of INI-CET items found | 8 repeated topics | 2 marked must know

| Topic                                                       | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20 |                                | Years seen                           |
|-------------------------------------------------------------|------------------|----------------------|-------------------|--------------------------------|--------------------------------------|
| <b>Corneal ulcer and keratitis</b><br><b>Must know</b>      | 4                | 8                    | <b>12</b>         | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2015, 16, 17, 18, 19     |
| <b>Glaucoma</b><br><b>Must know</b> <b>Recent</b>           | 6                | 4                    | <b>10</b>         | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 24<br>2015, 17, 18, 19 |
| <b>Lens &amp; cataract</b><br><b>Recent</b>                 | 3                | 5                    | <b>8</b>          | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2015, 16, 17, 19     |
| <b>Extraocular muscles / squint</b><br><b>Recent</b>        | 4                | 2                    | <b>6</b>          | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2015, 18             |
| <b>Community ophthalmology / blindness</b><br><b>Recent</b> | 3                | 3                    | <b>6</b>          | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 25<br>2017, 18, 19         |
| <b>Retina</b><br><b>Recent</b>                              | 3                | 3                    | <b>6</b>          | <b>INI-CET</b><br><b>AIIMS</b> | 2022, 24, 25<br>2015, 16, 19         |
| <b>Optic neuritis / RAPD / neuro-ophthalmology</b>          | 3                | 2                    | <b>5</b>          | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2017, 18                 |
| <b>Orbit / oculoplasty / lacrimal</b><br><b>Recent</b>      | 3                | 1                    | <b>4</b>          | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23<br>2017                 |

## High-yield one-liners

### Corneal ulcer

4/10 INI-CET · 8/10 AIIMS

- Fungal ulcer after vegetative injury: feathery margin, satellite lesions, hypopyon; natamycin 5%.
- Acanthamoeba: contact lens wearers, ring infiltrate, pain out of proportion.
- HSV: dendritic ulcer, treated with acyclovir; steroids are harmful in fungal ulcers.

### Glaucoma

6/10 INI-CET · 4/10 AIIMS

- Acute angle closure: pain, halos, mid-dilated pupil, shallow chamber; laser peripheral iridotomy is definitive.
- Prostaglandin analogues are first-line; timolol reduces aqueous production.
- Goldmann applanation tonometry is the reference method; atropine is contraindicated in angle closure.

### Cataract

3/10 INI-CET · 5/10 AIIMS

- Cataract is the leading cause of blindness in India.
- Sunflower cataract: Wilson disease, copper foreign body.
- Marfan: lens subluxes upward-outward; homocystinuria: downward-inward.
- Post-cataract endophthalmitis: Staph epidermidis commonest; P. acnes in delayed cases.

### Squint and eye movements

4/10 INI-CET · 2/10 AIIMS

- LR6 SO4: lateral rectus by abducens, superior oblique by trochlear, others by oculomotor.
- Trochlear palsy: head tilt away from the lesion.
- INO: failure of adduction of one eye with nystagmus in the abducting eye (MLF lesion, often MS).

### Community ophthalmology

3/10 INI-CET · 3/10 AIIMS

- WHO blindness: below 3/60 in the better eye with best correction.
- Trachoma: SAFE strategy.
- Amblyopia: patch the better eye.

### Retina

3/10 INI-CET · 3/10 AIIMS

- CRAO: cherry-red spot; CRVO: blood and thunder fundus.
- Retinitis pigmentosa: bone-spicule pigment, night blindness.
- Retinoblastoma: leukocoria, RB1 gene; Flexner-Wintersteiner rosettes.

### Optic neuritis

3/10 INI-CET · 2/10 AIIMS

- Painful visual loss on eye movement with RAPD and a normal disc (retrobulbar).
- Linked to multiple sclerosis; IV methylprednisolone speeds recovery.
- Papilloedema: bilateral disc swelling from raised ICP.



# Orthopaedics

2.7% of INI-CET items found | 6 repeated topics | 2 marked must know

| Topic                                                                  | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20 |                                                       | Years seen                           |
|------------------------------------------------------------------------|------------------|----------------------|-------------------|-------------------------------------------------------|--------------------------------------|
| <b>Fractures - upper limb / shoulder / distal radius / terrible...</b> | 5                | 8                    | <b>13</b>         | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>2015, 16, 17, 19 |
| <b>Must know</b> <b>Recent</b>                                         |                  |                      |                   |                                                       |                                      |
| <b>Spine</b>                                                           | 6                | 5                    | <b>11</b>         | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 24, 25<br>2015, 17, 18, 19 |
| <b>Must know</b> <b>Recent</b>                                         |                  |                      |                   |                                                       |                                      |
| <b>Bone tumours</b>                                                    | 4                | 2                    | <b>6</b>          | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23, 25<br>2018, 19         |
| <b>Recent</b>                                                          |                  |                      |                   |                                                       |                                      |
| <b>Open fractures &amp; trauma ortho</b>                               | 3                | 3                    | <b>6</b>          | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2015, 18, 19             |
| <b>Metabolic bone / joint disorders</b>                                | 2                | 4                    | <b>6</b>          | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2022<br>2016, 17, 18, 19             |
| <b>Fractures in children / paediatric ortho</b>                        | 3                | 2                    | <b>5</b>          | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23<br>2018, 19                 |
| <b>Recent</b>                                                          |                  |                      |                   |                                                       |                                      |

## High-yield one-liners

### Upper limb fractures

5/10 INI-CET · 8/10 AIIMS

- Scaphoid: snuffbox tenderness; avascular necrosis of the proximal pole; early X-ray may be normal.
- Colles: dinner-fork deformity. Monteggia: ulna fracture with radial head dislocation. Galeazzi: radius fracture with DRUJ dislocation.
- Terrible triad: elbow dislocation with radial head and coronoid fractures.
- Anterior shoulder dislocation: Bankart lesion and Hill-Sachs lesion; axillary nerve at risk.

### Spine

6/10 INI-CET · 5/10 AIIMS

- Pott spine commonly affects the thoracolumbar region; paradiscal disease with gibbus.
- Cauda equina syndrome (saddle anaesthesia, retention) needs urgent decompression.
- Straight leg raise is positive between about 30 and 70 degrees in lumbar disc prolapse.

### **Bone tumours**

4/10 INI-CET · 2/10 AIIMS

- Osteosarcoma: metaphysis, Codman triangle, sunburst.
- Ewing: diaphysis, onion-skin reaction, t(11;22).
- Giant cell tumour: epiphyseal, soap-bubble appearance.
- Osteochondroma is the commonest benign bone tumour.

### **Open fractures**

3/10 INI-CET · 3/10 AIIMS

- Gustilo I: wound under 1 cm; II: 1-10 cm; III: above 10 cm or extensive damage.
- Give antibiotics early (within an hour) and debride.
- Compartment syndrome: pain out of proportion and on passive stretch; fasciotomy.

### **Paediatric orthopaedics**

3/10 INI-CET · 2/10 AIIMS

- Supracondylar fracture: anterior interosseous nerve and brachial artery at risk.
- SCFE: obese adolescents; DDH: Ortolani and Barlow tests; CTEV: Ponseti method.

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# Anaesthesia

1.6% of INI-CET items found | 5 repeated topics | 0 marked must know

| Topic                                                      | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20 |                        | Years seen                             |
|------------------------------------------------------------|------------------|----------------------|-------------------|------------------------|----------------------------------------|
| Inhalational agents (potency, MAC, sevoflurane, nitrous... | 3                | 4                    | 7                 | <div><div></div></div> | INI-CET 2021, 22<br>AIIMS 2016, 17, 19 |
| Airway management / rapid sequence intubation              | 3                | 3                    | 6                 | <div><div></div></div> | INI-CET 2021, 22<br>AIIMS 2015, 17, 19 |
| Local anaesthetics / LA toxicity                           | 3                | 2                    | 5                 | <div><div></div></div> | INI-CET 2021, 22<br>AIIMS 2015, 19     |
| Neuromuscular blockers / reversal / monitoring             | 2                | 2                    | 4                 | <div><div></div></div> | INI-CET 2021, 25<br>AIIMS 2015, 16     |
| <div>Recent</div>                                          |                  |                      |                   |                        |                                        |
| Mechanical ventilation / ARDS / ventilator settings        | 3                | 0                    | 3                 | <div><div></div></div> | INI-CET 2021, 22, 23<br>AIIMS -        |

## High-yield one-liners

### Inhalational and induction agents

3/10 INI-CET · 4/10 AIIMS

- MAC is inversely related to potency; N<sub>2</sub>O about 104%, sevoflurane about 2%.
- Low blood-gas solubility (desflurane, N<sub>2</sub>O) means rapid onset and recovery.
- Sevoflurane suits inhalational induction in children; N<sub>2</sub>O expands air-filled cavities.
- Ketamine raises BP and is a bronchodilator; etomidate suppresses the adrenal.

### Airway and intubation

3/10 INI-CET · 3/10 AIIMS

- Capnography is the gold standard to confirm tube placement.
- Succinylcholine: avoid in hyperkalaemia, burns after day 1, denervation; malignant hyperthermia is treated with dantrolene.
- Rapid sequence induction: pre-oxygenate, induce, paralyse, intubate without bag ventilation.

### Local anaesthetics

3/10 INI-CET · 2/10 AIIMS

- Bupivacaine is the most cardiotoxic; treat toxicity with 20% lipid emulsion.
- Lignocaine maximum about 4.5 mg/kg plain, 7 mg/kg with adrenaline.
- Post-dural puncture headache: caffeine, then epidural blood patch.

### Ventilation and ARDS

3/10 INI-CET · 0/10 AIIMS

- ARDS lung-protective ventilation: tidal volume 6 mL/kg ideal body weight, plateau pressure below 30 cmH<sub>2</sub>O.
- Berlin criteria: PaO<sub>2</sub>/FiO<sub>2</sub> of 300 or less with PEEP 5 or more.
- Prone positioning helps in severe ARDS.

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# Radiology

2.6% of INI-CET items found | 5 repeated topics | 1 marked must know

| Topic                                                                          | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20           |                  | Years seen               |
|--------------------------------------------------------------------------------|------------------|----------------------|-----------------------------|------------------|--------------------------|
| <b>Neuroradiology</b><br><span>Must know</span> <span>Recent</span>            | 5                | 1                    | 6<br><div><div></div></div> | INI-CET<br>AIIMS | 2021, 22, 24<br>2019     |
| <b>Physics of imaging / contrast / radiation safety</b><br><span>Recent</span> | 4                | 2                    | 6<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 23, 24, 25<br>2018 |
| <b>Chest radiology</b>                                                         | 2                | 4                    | 6<br><div><div></div></div> | INI-CET<br>AIIMS | 2021, 22<br>2015, 16, 17 |
| <b>Musculoskeletal radiology</b><br><span>Recent</span>                        | 4                | 1                    | 5<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 24, 25<br>2015     |
| <b>GI radiology signs</b><br><span>Recent</span>                               | 4                | 0                    | 4<br><div><div></div></div> | INI-CET<br>AIIMS | 2022, 24, 25<br>-        |

## High-yield one-liners

### Neuroradiology

5/10 INI-CET · 1/10 AIIMS

- NCCT head is the first test in acute head injury and suspected haemorrhage.
- Epidural haematoma: biconvex; subdural: crescentic.
- MRI diffusion-weighted imaging shows acute infarcts earliest.
- Neurocysticercosis: cyst with eccentric scolex (dot-in-a-hole).

### Imaging physics and safety

4/10 INI-CET · 2/10 AIIMS

- Hounsfield units: water 0, air -1000, fat about -100, dense bone about +1000.
- Ultrasound and MRI without gadolinium are preferred in pregnancy.
- Gadolinium carries a risk of nephrogenic systemic fibrosis in severe renal failure.

### **Chest radiology**

2/10 INI-CET · 4/10 AIIMS

- Boot-shaped heart: TOF; egg on a string: TGA; snowman: supracardiac TAPVC.
- Rib notching: coarctation of the aorta.
- Pneumothorax: visible visceral pleural line without lung markings beyond it.

### **Musculoskeletal radiology**

4/10 INI-CET · 1/10 AIIMS

- Chronic osteomyelitis: sequestrum, involucrum, cloaca.
- Avascular necrosis: MRI is the most sensitive early test.
- Rickets: cupping and fraying; osteomalacia: Looser zones.

### **GI radiology signs**

4/10 INI-CET · 0/10 AIIMS

- Achalasia: bird-beak. Colonic cancer: apple-core. Crohn: string sign.
- Pneumoperitoneum: air under the diaphragm on an erect chest film; football sign when supine.
- Duodenal atresia: double-bubble.

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# Dermatology

3.3% of INI-CET items found | 8 repeated topics | 2 marked must know

| Topic                                                                                              | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20                   |                                | Years seen                           |
|----------------------------------------------------------------------------------------------------|------------------|----------------------|-------------------------------------|--------------------------------|--------------------------------------|
| <b>Autoimmune blistering disorders</b><br><span>Must know</span> <span>Recent</span>               | 5                | 5                    | <b>10</b><br><div><div></div></div> | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2015, 16, 17, 19 |
| <b>Psoriasis</b><br><span>Must know</span>                                                         | 4                | 5                    | <b>9</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22<br>2015, 16, 17, 19     |
| <b>Pigmentary disorders &amp; vitiligo /<br/>melasma / Lichen / skin...</b><br><span>Recent</span> | 4                | 4                    | <b>8</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 23, 24<br>2015, 17, 18     |
| <b>Alopecia / hair &amp; nail disorders</b><br><span>Recent</span>                                 | 4                | 3                    | <b>7</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22, 23<br>2016, 17, 19         |
| <b>Leprosy</b>                                                                                     | 3                | 2                    | <b>5</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2018, 19                 |
| <b>Cutaneous infections -<br/>bacterial/viral/parasitic</b>                                        | 3                | 1                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2021, 22<br>2016                     |
| <b>Skin signs of systemic / paediatric<br/>rheumatology disease</b>                                | 2                | 2                    | <b>4</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2022<br>2015, 18                     |
| <b>Deep fungal infections</b>                                                                      | 3                | 0                    | <b>3</b><br><div><div></div></div>  | <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22<br>-                        |

## High-yield one-liners

### Autoimmune blistering disorders

5/10 INI-CET · 5/10 AIIMS

- Pemphigus vulgaris: IgG to desmoglein 3, suprabasal acantholysis, fish-net DIF, Nikolsky positive.
- Bullous pemphigoid: BP180/BP230, subepidermal split, linear DIF.
- Dermatitis herpetiformis: granular IgA, coeliac link, dapsone.
- Pemphigus foliaceus: subcorneal split (desmoglein 1).

### Psoriasis

4/10 INI-CET · 5/10 AIIMS

- Auspitz sign, Koebner phenomenon, nail pitting.
- Methotrexate: hepatotoxic, give folic acid; acitretin: teratogenic; ciclosporin: nephrotoxic, hypertension.
- Lithium and beta blockers can worsen psoriasis.

### Pigmentary disorders and skin tumours

4/10 INI-CET · 4/10 AIIMS

- Basal cell carcinoma is the commonest skin cancer: pearly papule with rolled edge, face.
- Melanoma: Breslow thickness is the key prognostic factor.
- Acanthosis nigricans: insulin resistance.

### Hair disorders

4/10 INI-CET · 3/10 AIIMS

- Non-scarring: androgenetic, alopecia areata, telogen effluvium; frontal fibrosing alopecia is scarring.
- Alopecia areata: exclamation-mark hairs, nail pitting.
- Finasteride (5-alpha reductase inhibitor) and minoxidil treat androgenetic alopecia.

### Leprosy

3/10 INI-CET · 2/10 AIIMS

- Paucibacillary: up to 5 lesions, 6 months MDT; multibacillary: 6 or more, 12 months.
- Type 1 reaction (reversal): borderline disease, steroids. Type 2 (ENL): lepromatous, immune complexes.
- Thalidomide is contraindicated in pregnancy.



# Psychiatry

1.9% of INI-CET items found | 3 repeated topics | 1 marked must know

| Topic                                                                   | INI-CET<br>of 10 | AIIMS<br>PG<br>of 10 | Together<br>of 20 |                                                       | Years seen                           |
|-------------------------------------------------------------------------|------------------|----------------------|-------------------|-------------------------------------------------------|--------------------------------------|
| <b>Depression / suicide / antidepressants / anxiety / OCD / PTSD...</b> | 6                | 4                    | <b>10</b>         | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2020, 21, 22, 23<br>2015, 16, 18, 19 |
| <b>Must know</b>                                                        |                  |                      |                   |                                                       |                                      |
| <b>Eating disorders / sleep / sexual / personality / impulse...</b>     | 3                | 3                    | <b>6</b>          | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2022, 23<br>2015, 16, 19             |
| <b>Alcohol use disorder / withdrawal</b>                                | 4                | 0                    | <b>4</b>          | <div><div></div></div> <b>INI-CET</b><br><b>AIIMS</b> | 2020, 22, 23<br>-                    |

## High-yield one-liners

### Depression and anxiety

6/10 INI-CET · 4/10 AIIMS

- Major depression needs symptoms for at least 2 weeks; SSRIs are first-line.
- ECT works in severe, psychotic depression and catatonia.
- PTSD: symptoms for more than a month; generalised anxiety: 6 months or more.

### Eating disorders

3/10 INI-CET · 3/10 AIIMS

- Anorexia: low BMI, lanugo, bradycardia; refeeding syndrome causes hypophosphataemia.
- Bulimia: Russell sign, hypokalaemia; fluoxetine helps.
- SCOFF questionnaire screens for eating disorders.

### Alcohol

4/10 INI-CET · 0/10 AIIMS

- Withdrawal: tremor at 6-24 h, seizures 12-48 h, delirium tremens 48-96 h.
- Use lorazepam or oxazepam in liver disease; give thiamine before glucose.
- Wernicke: confusion, ataxia, ophthalmoplegia.

# Must-know summary

Topics found in 9 or more of the 20 sessions, or in 5 or more INI-CET sessions. If you only have time for a few hours, start here.

## Medicine

Heart failure, valvular disease, murmurs **13**    Electrolytes / acid-base / anion gap / osmotic demyelination **12**  
ECG / arrhythmias / ACS / MI / heart block **12**    Connective tissue diseases **10**    Lung diseases **10**  
Hypertension / lipid management / diabetes cardio risk **9**    Adrenal / pituitary / calcium **6**  
CNS infections / meningitis / encephalitis **5**

## Surgery

Breast cancer **15**    Trauma: chest injury, ICD insertion, FAST, ATLS **15**  
Hepatobiliary and pancreas surgery **14**    GI surgery **12**    Thyroid pathology / nodule **10**  
Wound / skin / burns / grafts / ulcers / Marjolin / biopsy... **9**

## Obstetrics & Gynaecology

Postpartum haemorrhage / AMTSL **12**    Gynaecological cancers (cervix, endometrium, ovary, DES) **12**  
Contraception **11**    PCOS / infertility / ovulation induction / male infertility **11**    Labour **10**  
Primary amenorrhoea / disorders of sexual development **9**    Preterm labour **9**

## Paediatrics

Neonatology **12**    Congenital heart disease **5**

## Pathology

Leukaemias and lymphomas **14**    Cell injury / apoptosis / necrosis / autophagy **10**  
Genetics - inheritance, imprinting, X-linked, aneuploidy,... **9**    Immunology **8**    Anaemia **8**  
Haemolytic anaemias **6**    Oncogenes / tumour genetics **6**

## Pharmacology

Pharmacokinetics **11**    Antimicrobials **11**    Antiepileptics **10**    Diabetes mellitus **9**    Antipsychotics **9**  
Autonomic pharmacology **9**    Opioids / analgesics / NSAIDs **9**  
Anticancer drugs / targeted therapy / immunotherapy **6**

## Microbiology

Parasitology (life cycles, filaria, hydatid, malaria) **15**    Mycology **11**    Staining techniques **10**



## Biochemistry

Vitamins **14**

Molecular biology techniques **12**

DNA repair / replication / gene expression / epigenetics **7**

Glycogen metabolism / storage diseases **7**

Enzyme kinetics & inhibition **7**

## Physiology

Muscle physiology **8**

GI physiology **6**

Renal physiology **6**



## Anatomy

Rotator cuff / shoulder / upper limb muscles & joints **6**

Trendelenburg sign / superior gluteal nerve **5**



## PSM

Immunisation **14**

Biostatistics (CI, tests of significance) **12**

Study designs **10**

Screening tests **10**

National health programmes **9**



## Forensic Medicine

Mechanical injuries / wounds **10**

Medical law / consent / ethics / confidentiality **9**

Postmortem changes **9**

Heavy metal poisoning **8**

Age estimation / ossification / dental eruption / identification **8**

Asphyxial deaths **7**



## ENT

Nose and sinuses **12**

Larynx & pharynx **11**

Otology **6**



## Ophthalmology

Corneal ulcer and keratitis **12**

Glaucoma **10**



## Orthopaedics

Fractures - upper limb / shoulder / distal radius / terrible... **13**

Spine **11**



## Radiology

Neuroradiology **6**



## Dermatology

Autoimmune blistering disorders **10**

Psoriasis **9**



## Psychiatry

Depression / suicide / antidepressants / anxiety / OCD / PTSD... **10**

The number is the count of sessions out of 20.

# Topics with a better chance of coming up

This is a probability guide built from how often and how recently a topic appeared. It is not a forecast of the paper, and no topic is certain to appear.

## Seen often, and also in the recent sources

Found in 4 or more INI-CET sessions and again in 2023 Nov to 2025 material.

Breast cancer Surgery    Trauma: chest injury, ICD insertion, FAST, ATLS Surgery

Parasitology (life cycles, filaria, hydatid, malaria) Microbiology    Hepatobiliary and pancreas surgery Surgery

Vitamins Biochemistry    Immunisation PSM    Leukaemias and lymphomas Pathology

Fractures - upper limb / shoulder / distal radius / terrible... Orthopaedics

Heart failure, valvular disease, murmurs Medicine    Molecular biology techniques Biochemistry

Nose and sinuses ENT    Postpartum haemorrhage / AMTSL Obstetrics & Gynaecology

Electrolytes / acid-base / anion gap / osmotic demyelination Medicine

Biostatistics (CI, tests of significance) PSM    Neonatology Paediatrics    GI surgery Surgery

Mycology Microbiology    Larynx & pharynx ENT    Pharmacokinetics Pharmacology    Antimicrobials Pharmacology

Spine Orthopaedics    Contraception Obstetrics & Gynaecology

PCOS / infertility / ovulation induction / male infertility Obstetrics & Gynaecology    Antiepileptics Pharmacology

Cell injury / apoptosis / necrosis / autophagy Pathology    Mechanical injuries / wounds Forensic Medicine

Glaucoma Ophthalmology    Connective tissue diseases Medicine    Lung diseases Medicine

Study designs PSM    Staining techniques Microbiology    Autoimmune blistering disorders Dermatology

Genetics - inheritance, imprinting, X-linked, aneuploidy,... Pathology    Autonomic pharmacology Pharmacology

Primary amenorrhoea / disorders of sexual development Obstetrics & Gynaecology

Medical law / consent / ethics / confidentiality Forensic Medicine    Opioids / analgesics / NSAIDs Pharmacology

Preterm labour Obstetrics & Gynaecology    Wound / skin / burns / grafts / ulcers / Marjolin / biopsy... Surgery

Anaemia Pathology    Heavy metal poisoning Forensic Medicine

Age estimation / ossification / dental eruption / identification Forensic Medicine    Muscle physiology Physiology

Audiology ENT    Growth & development Paediatrics

Ectopic pregnancy / early pregnancy Obstetrics & Gynaecology

Pigmentary disorders & vitiligo / melasma / Lichen / skin... Dermatology    Asphyxial deaths Forensic Medicine

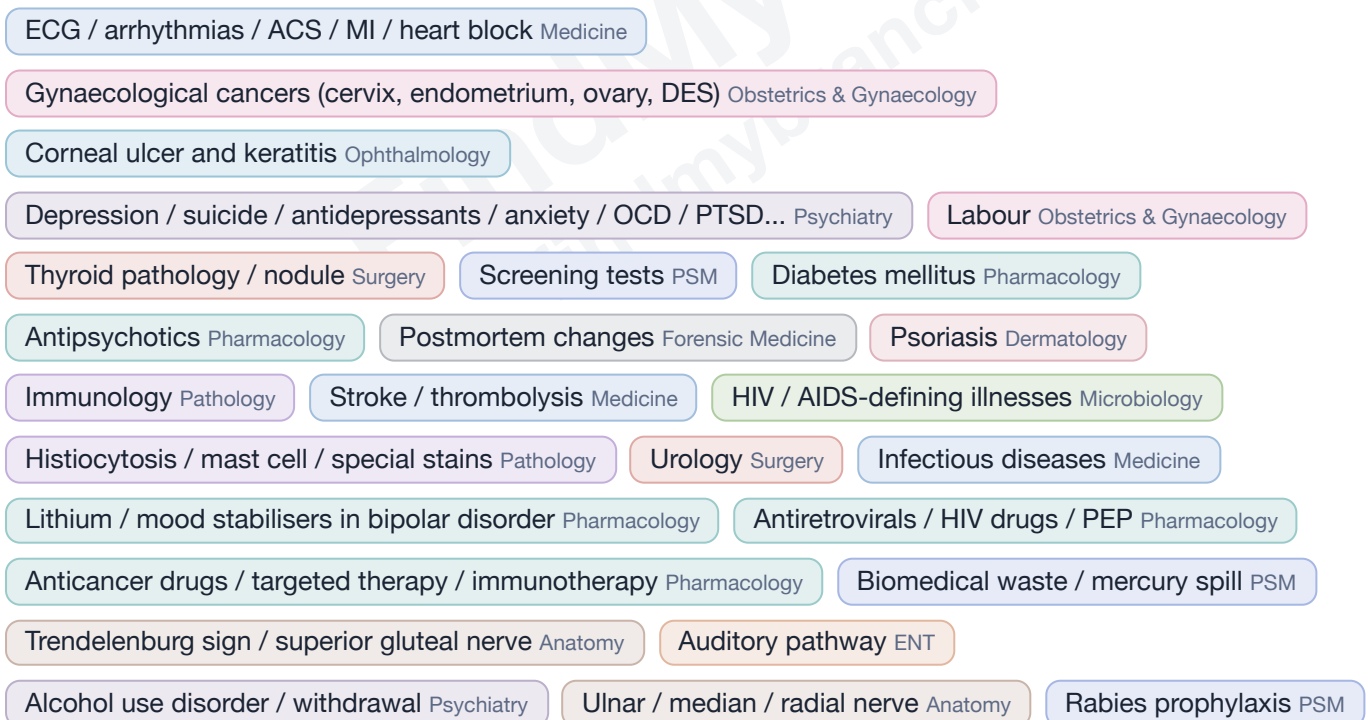
DNA repair / replication / gene expression / epigenetics Biochemistry

Glycogen metabolism / storage diseases Biochemistry    Enzyme kinetics & inhibition Biochemistry



## Seen often, not in the recent partial sources

The recent sources are incomplete, so their absence is weak evidence.



### Newer-trend items worth a look

- Imaging and procedure stems: ICD insertion, chest radiograph in trauma, MRCP, barium swallow signs, OCT.
- Drug updates: bempedoic acid, trofinetide (Rett), checkpoint inhibitors, SGLT2 inhibitor adverse effects.
- Law and programme items: MTP (Amendment) Act 2021, drug schedules, NTEP, Anaemia Mukh Bharat, Ayushman Arogya Mandir.
- Image-based questions appear in every paper, so glance at radiology, histology and clinical photographs.

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# Practice questions

Practice questions modelled on past patterns

**Optional, and not for everyone.** Solving a practice paper can bring unnecessary worry just before the exam. If you are well prepared, please skip this section and revise from your own plan. For others, it is simply a gentle way to see how repeated topics may be asked. There is no guarantee that any of these topics or questions will appear.

141 single-best-answer questions in original wording, grouped by subject. Each fact was checked against standard textbooks; items we were not fully sure of were dropped. Answers with one-line explanations are at the end.

## 1 MEDICINE

Syringomyelia classically causes:

- A Loss of touch with preserved pain sensation
- B Cape-like loss of pain and temperature with preserved touch
- C Spastic paraplegia without sensory loss
- D Loss of vibration only

## 2 MEDICINE

ST elevation in leads II, III and aVF is most commonly due to occlusion of the:

- A Diagonal branch
- B Left anterior descending artery
- C Left main coronary artery
- D Right coronary artery

## 3 MEDICINE

Which of the following is NOT used in the emergency treatment of hyperkalaemia?

- A Insulin with dextrose
- B Nebulised salbutamol
- C Calcium gluconate
- D Spironolactone

## 4 MEDICINE

The most specific antibody for SLE is:

- A Anti-Smith
- B Anti-histone
- C ANA
- D Anti-centromere

## 5 MEDICINE

The drug of choice for severe falciparum malaria is:

- A Oral sulfadoxine-pyrimethamine
- B IV artesunate
- C Primaquine
- D Oral chloroquine

## 6 MEDICINE

Which of the following is NOT a cause of high-output cardiac failure?

- A Paget disease of bone
- B Beriberi
- C Aortic stenosis
- D Thyrotoxicosis

**7 MEDICINE**

Which of the following does NOT cause a high anion gap metabolic acidosis?

- A Lactic acidosis
- B Methanol poisoning
- C Diabetic ketoacidosis
- D Diarrhoea

**8 MEDICINE**

Transmural inflammation with skip lesions is characteristic of:

- A Ischaemic colitis
- B Microscopic colitis
- C Ulcerative colitis
- D Crohn disease

**9 MEDICINE**

Which of the following is NOT an AIDS-defining malignancy?

- A Non-Hodgkin lymphoma
- B Kaposi sarcoma
- C Melanoma
- D Invasive cervical carcinoma

**10 MEDICINE**

Overly rapid correction of chronic hyponatraemia risks:

- A Wernicke encephalopathy
- B Hyponatraemic seizures
- C Cerebral oedema
- D Central pontine myelinolysis

**11 MEDICINE**

CSF with low glucose, high protein and neutrophil predominance suggests:

- A Normal pressure hydrocephalus
- B Viral meningitis
- C Guillain-Barre syndrome
- D Bacterial meningitis

**12 MEDICINE**

Resection of the terminal ileum leads to macrocytic anaemia because of:

- A Folate loss
- B Copper deficiency
- C Iron loss
- D Vitamin B12 malabsorption

**13 MEDICINE**

Anti-centromere antibodies are associated with:

- A SLE
- B Limited cutaneous systemic sclerosis
- C Diffuse systemic sclerosis
- D Dermatomyositis

**14 MEDICINE**

Which feature is specific to Graves disease among causes of thyrotoxicosis?

- A Weight loss
- B Tachycardia
- C Heat intolerance
- D Infiltrative exophthalmos

**15 MEDICINE**

A collapsing pulse with an early diastolic murmur and an apical mid-diastolic rumble (Austin Flint murmur) indicates:

- A Aortic regurgitation
- B Mitral stenosis
- C Mitral regurgitation
- D Tricuspid stenosis

**16 MEDICINE**

The earliest ECG change of hyperkalaemia is:

- A U waves
- B Prolonged QT interval
- C Tall, peaked T waves
- D ST elevation

**17 MEDICINE**

Contralateral loss of pain and temperature with ipsilateral loss of motor power and vibration sense suggests:

- A Brown-Sequard syndrome
- B Subacute combined degeneration
- C Anterior spinal artery syndrome
- D Central cord syndrome

**18 MEDICINE**

Intravenous alteplase for acute ischaemic stroke is given within:

- A 24 hours
- B 1 hour only
- C 12 hours
- D 4.5 hours of symptom onset

**19 MEDICINE**

Which antibody is specific for diffuse cutaneous systemic sclerosis?

- A Anti-histone
- B Anti-Ro
- C Anti-centromere
- D Anti-topoisomerase I (Scl-70)

**20 SURGERY**

BI-RADS category 5 on mammography means:

- A Incomplete assessment
- B Probably benign
- C Negative
- D Highly suggestive of malignancy; biopsy needed

**21 SURGERY**

Immediate management of tension pneumothorax with hypotension is:

- A CT chest
- B Intubation first
- C Chest X-ray first
- D Needle decompression

**22 SURGERY**

Neurogenic shock is characterised by:

- A Hypertension with bradycardia
- B Hypotension with bradycardia
- C Hypertension with tachycardia
- D Hypotension with tachycardia

**23 SURGERY**

Which agent given preoperatively reduces thyroid vascularity in Graves disease?

- A Furosemide
- B Lugol iodine
- C Methimazole alone
- D Hydrocortisone

**24 SURGERY**

The most common site of abdominal tuberculosis is the:

- A Rectum
- B Ileocaecal region
- C Stomach
- D Sigmoid colon

**25 SURGERY**

The first step in the ATLS primary survey is:

- A Secondary survey
- B IV access
- C Chest drain
- D Airway with cervical spine protection

**26 SURGERY**

Marjolin ulcer is most commonly a:

- A Basal cell carcinoma
- B Squamous cell carcinoma
- C Melanoma
- D Sarcoma

**27 SURGERY**

In hypospadias repair, which step comes first?

- A Glanuloplasty
- B Scrotoplasty
- C Correction of chordee (orthoplasty)
- D Urethroplasty

**28 SURGERY**

The most common histological type of thyroid cancer is:

- A Papillary carcinoma
- B Medullary carcinoma
- C Anaplastic carcinoma
- D Follicular carcinoma

**29 SURGERY**

Beck triad (hypotension, raised venous pressure, muffled heart sounds) indicates:

- A Flail chest
- B Cardiac tamponade
- C Massive haemothorax
- D Tension pneumothorax

**30 SURGERY**

Fluid requirement in the first 24 hours of a burn by the Parkland formula is:

- A  $2 \text{ mL} \times \text{weight} \times \% \text{ TBSA}$
- B  $10 \text{ mL} \times \text{weight} \times \% \text{ TBSA}$
- C  $1 \text{ mL} \times \text{weight} \times \% \text{ TBSA}$
- D  $4 \text{ mL} \times \text{body weight (kg)} \times \% \text{ TBSA burned}$

**31 SURGERY**

Fever, jaundice and right upper quadrant pain (Charcot triad) suggest:

- A Acute appendicitis
- B Hepatic abscess only
- C Acute pancreatitis
- D Acute cholangitis

**32 OBSTETRICS & GYNAECOLOGY**

The earliest sign of magnesium sulphate toxicity is:

- A Loss of patellar reflex
- B Oliguria
- C Respiratory depression
- D Cardiac arrest

**33 OBSTETRICS & GYNAECOLOGY**

Carboprost is contraindicated in:

- A Bronchial asthma
- B Diabetes
- C Anaemia
- D Hypothyroidism

**34 OBSTETRICS & GYNAECOLOGY**

Late decelerations on CTG indicate:

- A Normal variation
- B Uteroplacental insufficiency
- C Head compression
- D Cord compression

**35 OBSTETRICS & GYNAECOLOGY**

Primary amenorrhoea, absent breast development, streak gonads and raised FSH suggest:

- A Mullerian agenesis
- B Kallmann syndrome
- C Turner syndrome (45,X)
- D Androgen insensitivity

**36 OBSTETRICS & GYNAECOLOGY**

Under the MTP (Amendment) Act 2021, opinion of two registered medical practitioners is needed for termination at:

- A 20 to 24 weeks (eligible categories)
- B Any gestation
- C Up to 12 weeks
- D 12 to 20 weeks only

**37 OBSTETRICS & GYNAECOLOGY**

Long-term combined oral contraceptive use reduces the risk of:

- A Ovarian cancer
- B Hepatic adenoma
- C Cervical cancer
- D Breast cancer

**38 OBSTETRICS & GYNAECOLOGY**

Painless recurrent bleeding in the third trimester suggests:

- A Placental abruption
- B Placenta praevia
- C Uterine rupture
- D Vasa praevia only

**39 OBSTETRICS & GYNAECOLOGY**

The first-line drug for ovulation induction in polycystic ovary syndrome is:

- A Dexamethasone
- B Bromocriptine
- C Metformin alone
- D Letrozole

**40 OBSTETRICS & GYNAECOLOGY**

Antenatal corticosteroids given to a mother in threatened preterm labour mainly reduce neonatal:

- A Respiratory distress syndrome
- B Jaundice
- C Sepsis from group B streptococcus
- D Hypoglycaemia

**41 OBSTETRICS & GYNAECOLOGY**

The commonest site of ectopic pregnancy is the:

- A Ovary
- B Cervix
- C Ampulla of the fallopian tube
- D Isthmus

**42 PAEDIATRICS**

Which cyanotic heart disease has increased pulmonary blood flow?

- A Tetralogy of Fallot
- B Ebstein anomaly
- C Transposition of great arteries
- D Pulmonary atresia

**43 PAEDIATRICS**

Which factor increases the risk of recurrence of febrile seizures?

- A Age above 3 years
- B Age at first seizure below 12 months
- C Fever lasting many hours before the seizure
- D Temperature above 40 C at onset

**44 PAEDIATRICS**

Secondary prophylaxis of rheumatic fever uses:

- A Azithromycin weekly
- B Benzathine penicillin IM every 3-4 weeks
- C Cefixime monthly
- D Oral amoxicillin daily

**45 PAEDIATRICS**

A sweat chloride level above 60 mmol/L on two occasions confirms:

- A Kartagener syndrome only
- B Coeliac disease
- C Cystic fibrosis
- D Primary ciliary dyskinesia

**46 PAEDIATRICS**

Which of the following is NOT a component of tetralogy of Fallot?

- A Atrial septal defect
- B Right ventricular outflow obstruction
- C Overriding of the aorta
- D Ventricular septal defect

**47 PAEDIATRICS**

A newborn has a heart rate of 50 per minute after 30 seconds of effective ventilation. The next step is:

- A Give adrenaline only
- B Stop resuscitation
- C Continue ventilation alone for 2 minutes
- D Start chest compressions

**48 PATHOLOGY**

Which finding is expected in anaemia of chronic disease?

- A Low hepcidin
- B High TIBC
- C Raised hepcidin
- D Low serum ferritin

**49 PATHOLOGY**

A patient has a total leucocyte count of 450,000 per microlitre with neutrophilia, eosinophilia and basophilia. The most likely diagnosis is:

- A Leukemoid reaction
- B Chronic myeloid leukaemia
- C Acute promyelocytic leukaemia
- D Chronic lymphocytic leukaemia

**50 PATHOLOGY**

CD40 ligand deficiency typically produces:

- A Low IgG, IgA, IgE with normal or high IgM
- B Absent NK cells
- C Neutrophil killing defect
- D Absent CD8 cells

**51 PATHOLOGY**

The initiator caspase of the intrinsic (mitochondrial) pathway of apoptosis is:

- A Caspase 9
- B Caspase 8
- C Caspase 7
- D Caspase 3

**52 PATHOLOGY**

Prader-Willi syndrome is caused by loss of the:

- A Paternal 7q
- B Paternal 15q11-q13
- C Maternal 15q11-q13
- D Maternal X

**53 PATHOLOGY**

True of hereditary spherocytosis is:

- A Positive direct Coombs test
- B Decreased osmotic fragility
- C Increased MCHC
- D X-linked inheritance

**54 PATHOLOGY**

Metachromatic staining with toluidine blue is characteristic of:

- A Lymphocytes
- B Mast cells
- C Fibroblasts
- D Macrophages

**55 PATHOLOGY**

Reed-Sternberg cells of classical Hodgkin lymphoma express:

- A CD3 and CD20
- B CD15 and CD30
- C CD10 and CD19 only
- D CD5 and CD23

**56 PATHOLOGY**

Starry-sky appearance with t(8;14) involving the c-MYC gene is typical of:

- A Burkitt lymphoma
- B Hodgkin lymphoma
- C Follicular lymphoma
- D Mantle cell lymphoma

**57 PATHOLOGY**

Apple-green birefringence under polarised light after Congo red staining indicates:

- A Glycogen
- B Collagen
- C Hyaline arteriosclerosis
- D Amyloid

**58 PATHOLOGY**

Recurrent non-pitting swelling without urticaria and a low C4 level suggest deficiency of:

- A Factor H
- B CD59
- C C1 esterase inhibitor
- D C3

**59 PHARMACOLOGY**

Imatinib inhibits:

- A HER2
- B EGFR
- C mTOR
- D BCR-ABL tyrosine kinase

**60 PHARMACOLOGY**

A diabetic woman develops vulvovaginal candidiasis. The drug most likely responsible is:

- A Metformin
- B Canagliflozin
- C Sitagliptin
- D Glimepiride

**61 PHARMACOLOGY**

Which statement about lithium is true?

- A It is safe for the fetus in the first trimester
- B It is metabolised by the liver
- C It can cause nephrogenic diabetes insipidus
- D It needs no level monitoring

**62 PHARMACOLOGY**

A young man on risperidone develops sudden torticollis and oculogyric crisis. Best treatment:

- A Parenteral anticholinergic (benztropine)
- B Levodopa
- C Increase risperidone dose
- D Propranolol

**63 PHARMACOLOGY**

The serious adverse effect requiring regular blood count monitoring with clozapine is:

- A Polycythaemia
- B Hemolysis
- C Thrombocytosis
- D Agranulocytosis

**64 PHARMACOLOGY**

Bempedoic acid lowers cholesterol by inhibiting:

- A NPC1L1
- B PCSK9
- C ATP citrate lyase
- D HMG-CoA reductase

**65 PHARMACOLOGY**

Which of the following is NOT an antiplatelet drug?

- A Fondaparinux
- B Ticagrelor
- C Clopidogrel
- D Aspirin

**66 PHARMACOLOGY**

Thalidomide, a teratogen causing phocomelia, is therapeutically used in:

- A Tuberculosis
- B Malaria
- C Epilepsy
- D Type 2 lepra reaction (ENL)

**67 PHARMACOLOGY**

The specific antidote for digoxin toxicity is:

- A Flumazenil
- B Digoxin-specific Fab fragments
- C Atropine
- D Protamine sulphate

**68 PHARMACOLOGY**

The antidote that replenishes glutathione in paracetamol overdose is:

- A Naloxone
- B Pralidoxime
- C Fomepizole
- D N-acetylcysteine

**69 PHARMACOLOGY**

Testing for HLA-B\*5701 is advised before starting:

- A Abacavir
- B Carbamazepine
- C Tenofovir
- D Allopurinol

**70 MICROBIOLOGY**

In a person vaccinated against hepatitis B, the only positive marker is:

- A HBeAg
- B HBsAg
- C Anti-HBc IgM
- D Anti-HBs

**71 MICROBIOLOGY**

Negri bodies are characteristic of infection with:

- A Herpes simplex virus
- B Cytomegalovirus
- C Rabies virus
- D Molluscum contagiosum virus

**72 MICROBIOLOGY**

Enterohaemorrhagic E. coli causes haemolytic uraemic syndrome by producing:

- A Heat-stable toxin
- B Shiga toxin
- C Invasion plasmid antigen
- D Heat-labile toxin

**73 MICROBIOLOGY**

Which of the following does NOT kill bacterial spores?

- A Glutaraldehyde (prolonged exposure)
- B Autoclaving
- C Ethylene oxide
- D 70% isopropyl alcohol

**74 MICROBIOLOGY**

Watery diarrhoea in an HIV patient (CD4 145) with oocysts best shown by:

- A Gram stain
- B Giemsa stain
- C Modified acid-fast stain
- D India ink

**75 MICROBIOLOGY**

For rK39-positive kala-azar in India, the preferred treatment is:

- A Fluconazole
- B Single-dose liposomal amphotericin B
- C Oral miltefosine alone for 6 months
- D Sodium stibogluconate

**76 MICROBIOLOGY**

CBNAAT (GeneXpert) detects rifampicin resistance through mutations in:

- A gyrA
- B inhA
- C rpoB
- D katG

**77 MICROBIOLOGY**

Scrub typhus is caused by *Orientia tsutsugamushi* and is best treated with:

- A Ceftriaxone alone
- B Doxycycline
- C Gentamicin
- D Fluconazole

**78 MICROBIOLOGY**

Broad, ribbon-like aseptate hyphae with right-angle branching are typical of:

- A Cryptococcosis
- B Candidiasis
- C Mucormycosis
- D Aspergillosis

**79 BIOCHEMISTRY**

Pompe disease is due to deficiency of:

- A Muscle phosphorylase
- B Glucose-6-phosphatase
- C Debranching enzyme
- D Lysosomal acid alpha-1,4-glucosidase

**80 BIOCHEMISTRY**

Xanthurenic aciduria after a tryptophan load indicates deficiency of:

- A Riboflavin
- B Niacin
- C Pyridoxine (B6)
- D Thiamine

**81 BIOCHEMISTRY**

Dideoxynucleotides terminate chain elongation in Sanger sequencing because they lack the:

- A 2' hydroxyl group
- B Nitrogenous base
- C 3' hydroxyl group
- D 5' phosphate

**82 BIOCHEMISTRY**

Which amino acids must be restricted in maple syrup urine disease?

- A Methionine and cysteine
- B Phenylalanine and tyrosine
- C Leucine, isoleucine and valine
- D Lysine and tryptophan

**83 BIOCHEMISTRY**

In competitive enzyme inhibition:

- A  $K_m$  is increased and  $V_{max}$  unchanged
- B  $K_m$  unchanged and  $V_{max}$  decreased
- C  $K_m$  decreased and  $V_{max}$  increased
- D Both  $K_m$  and  $V_{max}$  decreased

**84 BIOCHEMISTRY**

An infant with severe fasting hypoglycaemia, lactic acidosis, hepatomegaly and hyperuricaemia most likely has deficiency of:

- A Branching enzyme
- B Muscle phosphorylase
- C Glucose-6-phosphatase
- D Debranching enzyme

**85 BIOCHEMISTRY**

Selenocysteine, the 21st amino acid, is encoded by which codon?

- A UAG
- B UAA
- C AUG
- D UGA

**86 PHYSIOLOGY**

Which of the following does NOT shift the oxygen-haemoglobin dissociation curve to the right?

- A Increased 2,3-BPG
- B Acidosis
- C Hypothermia
- D Increased  $PCO_2$

**87** **PHYSIOLOGY**

In the complete absence of ADH, the tubular fluid leaving the proximal convoluted tubule is:

- A Hypertonic to plasma
- B Hypotonic to plasma
- C Isotonic to plasma
- D Hypertonic only in the medulla

**88** **PHYSIOLOGY**

During skeletal muscle contraction, which part of the sarcomere does NOT change in length?

- A A band
- B H zone
- C Distance between Z lines
- D I band

**89** **PHYSIOLOGY**

The plateau phase of the ventricular myocyte action potential is mainly due to:

- A Na<sup>+</sup> influx
- B K<sup>+</sup> influx
- C Ca<sup>2+</sup> influx through L-type channels balanced by K<sup>+</sup> efflux
- D Cl<sup>-</sup> influx

**90** **PHYSIOLOGY**

Pulmonary surfactant is secreted by:

- A Type I pneumocytes
- B Type II pneumocytes
- C Clara cells
- D Alveolar macrophages

**91** **ANATOMY**

A patient standing on the right leg shows the pelvis dropping on the left side. Which nerve is most likely injured?

- A Obturator nerve
- B Right superior gluteal nerve
- C Left superior gluteal nerve
- D Right inferior gluteal nerve

**92** **ANATOMY**

The characteristic hand deformity in Klumpke paralysis (C8-T1 injury) is:

- A Wrist drop
- B Ape hand
- C Claw hand
- D Waiter's tip

**93** **ANATOMY**

The optic radiation passes through which part of the internal capsule?

- A Sublentiform part
- B Retrolenticular part
- C Genu
- D Anterior limb

**94** **ANATOMY**

Contralateral hemiballismus is classically due to a lesion of the:

- A Subthalamic nucleus
- B Putamen
- C Caudate nucleus
- D Substantia nigra pars compacta

**95** **ANATOMY**

A subdural haematoma in an elderly patient after minor trauma results from tearing of:

- A Bridging (cortical) veins
- B Middle meningeal artery
- C Lenticulostriate artery
- D Vertebral artery

**96** **ANATOMY**

Hypocalcaemic tetany with absent thymus (DiGeorge syndrome) results from defective development of the:

- A Fifth pouch
- B First and second pharyngeal pouches
- C Third and fourth pharyngeal pouches
- D Second pouch only

**97 ANATOMY**

Froment sign tests the function of:

- A Extensor pollicis longus (radial nerve)
- B Adductor pollicis (ulnar nerve)
- C Opponens pollicis (median nerve)
- D Abductor pollicis brevis (median nerve)

**98 ANATOMY**

Which of the following does NOT pass through the jugular foramen?

- A Accessory nerve
- B Glossopharyngeal nerve
- C Hypoglossal nerve
- D Vagus nerve

**99 PSM**

The confidence interval becomes narrower when:

- A Sample size decreases
- B Sample size increases
- C Confidence level increases
- D Variability increases

**100 PSM**

When disease prevalence in the screened population falls, the positive predictive value:

- A Decreases
- B Equals sensitivity
- C Stays constant
- D Increases

**101 PSM**

Rotavirus vaccine is contraindicated in a child with a history of:

- A Malnutrition
- B Diarrhoea
- C Intussusception
- D Fever

**102 PSM**

Dose of human rabies immunoglobulin for category III exposure is:

- A 40 IU/kg
- B 100 IU/kg
- C 20 IU/kg
- D 10 IU/kg

**103 PSM**

Under NLEP, duration of multidrug therapy for multibacillary leprosy is:

- A 3 months
- B 24 months
- C 6 months
- D 12 months

**104 PSM**

As per BMW rules 2016, needles and syringes with fixed needles go in:

- A Red bag
- B Yellow bag
- C White translucent puncture-proof container
- D Blue box

**105 PSM**

The test used to compare the means of two independent groups of quantitative data is the:

- A Unpaired (independent) t test
- B Pearson correlation
- C Chi-square test
- D Paired t test

**106 FORENSIC MEDICINE**

Mees (Aldrich-Mees) lines on the nails are seen in poisoning with:

- A Arsenic
- B Mercury
- C Lead
- D Copper

**107 FORENSIC MEDICINE**

The toxic principle of Datura seeds is mainly:

- A Strychnine
- B Abrin
- C Hyoscyamine (atropine-like alkaloids)
- D Morphine

**108 FORENSIC MEDICINE**

Which epiphysis is among the last to unite and helps in age estimation up to the mid-twenties?

- A Medial end of clavicle
- B Lower end of radius
- C Head of humerus
- D Iliac crest

**109 FORENSIC MEDICINE**

In organophosphate poisoning the standard drug combination is:

- A Fomepizole and ethanol
- B Atropine and pralidoxime
- C Physostigmine and neostigmine
- D Naloxone and flumazenil

**110 ENT**

In the auditory pathway the structure between the lateral lemniscus and the medial geniculate body is:

- A Inferior colliculus
- B Cochlear nucleus
- C Superior olivary nucleus
- D Trapezoid body

**111 ENT**

Antrochoanal polyp typically arises from the:

- A Maxillary sinus
- B Sphenoid sinus
- C Frontal sinus
- D Ethmoid sinus

**112 ENT**

The Dix-Hallpike manoeuvre diagnoses:

- A Meniere disease
- B Vestibular neuritis
- C Acoustic neuroma
- D BPPV

**113 ENT**

The only abductor of the vocal cords is the:

- A Lateral cricoarytenoid
- B Posterior cricoarytenoid
- C Thyroarytenoid
- D Cricothyroid

**114 ENT**

A dip in bone conduction at 2 kHz (Carhart notch) is seen in:

- A Otosclerosis
- B Presbycusis
- C Noise-induced hearing loss
- D Meniere disease

**115 OPHTHALMOLOGY**

Atropine is contraindicated in:

- A Cycloplegic refraction
- B Amblyopia
- C Primary angle-closure glaucoma
- D Uveitis

**116 OPHTHALMOLOGY**

The primary action of the superior oblique muscle is:

- A Intorsion
- B Extorsion
- C Elevation
- D Adduction

**117 OPTHALMOLOGY**

Painful loss of vision with RAPD and a normal fundus in a young woman suggests:

- A Retinal detachment
- B CRAO
- C Papilloedema
- D Retrobulbar optic neuritis

**118 OPTHALMOLOGY**

Fungal keratitis after injury with vegetable matter is treated with topical:

- A Tobramycin
- B Natamycin 5%
- C Acyclovir
- D Dexamethasone

**119 OPTHALMOLOGY**

Which anti-glaucoma drug class is usually first-line and acts by increasing uveoscleral outflow?

- A Alpha-2 agonists
- B Beta blockers
- C Carbonic anhydrase inhibitors
- D Prostaglandin analogues

**120 ORTHOPAEDICS**

The terrible triad of the elbow comprises elbow dislocation with:

- A Radial head and coronoid fractures
- B Olecranon and medial epicondyle fractures
- C Capitellum and trochlea fractures
- D Supracondylar fracture

**121 ORTHOPAEDICS**

Codman triangle and sunburst appearance in a 17-year-old with tibial swelling suggest:

- A Chondrosarcoma
- B Giant cell tumour
- C Osteosarcoma
- D Osteoid osteoma

**122 ORTHOPAEDICS**

Fracture of the scaphoid carries the highest risk of:

- A Avascular necrosis of the proximal pole
- B Median nerve palsy
- C Malunion with cubitus varus
- D Volkmann contracture

**123 ORTHOPAEDICS**

In a child with an extension-type supracondylar humerus fracture, the nerve most often injured is the:

- A Axillary nerve
- B Ulnar nerve
- C Musculocutaneous nerve
- D Anterior interosseous nerve

**124 ANAESTHESIA**

Which is INCORRECT about adult CPR?

- A Allow full chest recoil
- B Ventilation 20-25 breaths/min with advanced airway
- C Depth 5-6 cm
- D Compression rate 100-120/min

**125 ANAESTHESIA**

The most specific reversal agent for rocuronium or vecuronium is:

- A Neostigmine
- B Atropine
- C Sugammadex
- D Edrophonium

**126 ANAESTHESIA**

The local anaesthetic most associated with cardiotoxicity, treated with intravenous lipid emulsion, is:

- A Bupivacaine
- B Procaine
- C Lignocaine
- D Prilocaine

**127 ANAESTHESIA**

Succinylcholine is relatively contraindicated in:

- A Hypokalaemia
- B Hyperkalaemia and extensive burns after the first day
- C Asthma
- D Myasthenia gravis only

**128 RADIOLOGY**

A bird-beak appearance on barium swallow indicates:

- A Diffuse oesophageal spasm
- B Achalasia cardia
- C Oesophageal carcinoma
- D Hiatus hernia

**129 RADIOLOGY**

Banana sign on fetal ultrasound is seen in:

- A Open neural tube defect
- B Hydrocephalus
- C Anencephaly only
- D Down syndrome

**130 RADIOLOGY**

The Hounsfield unit of water is:

- A -100
- B +1000
- C 0
- D -1000

**131 RADIOLOGY**

A double-bubble sign in a newborn indicates:

- A Duodenal atresia
- B Pyloric stenosis
- C Meconium plug
- D Hirschsprung disease

**132 DERMATOLOGY**

Gotttron papules are seen in:

- A Dermatomyositis
- B Psoriasis
- C Pemphigus
- D Lichen planus

**133 DERMATOLOGY**

Erythrasma shows which colour on Wood lamp examination?

- A Blue-white
- B Coral red
- C No fluorescence
- D Yellow-green

**134 DERMATOLOGY**

Pemphigus vulgaris shows histologically:

- A Suprabasal acantholysis
- B Subepidermal split
- C Eosinophilic spongiosis only
- D Granular IgA deposits

**135 DERMATOLOGY**

Direct immunofluorescence of pemphigus vulgaris shows:

- A Granular IgA in dermal papillae
- B Deposits only around hair follicles
- C Linear IgG along the basement membrane
- D Intercellular IgG in a fish-net pattern

**136 DERMATOLOGY**

Paucibacillary leprosy is treated with multidrug therapy for:

- A 3 months
- B 6 months
- C 12 months
- D 24 months

**137 PSYCHIATRY**

Benzodiazepine of choice for alcohol withdrawal in a patient with deranged liver function:

- A Lorazepam
- B Diazepam
- C Chlordiazepoxide
- D Clonazepam

**138 PSYCHIATRY**

A patient says 'my brain is missing, I am already dead.' This is:

- A Delusion of persecution
- B Nihilistic delusion (Cotard)
- C Obsession
- D Delusion of grandeur

**139 PSYCHIATRY**

La belle indifference is most typical of:

- A OCD
- B Generalised anxiety disorder
- C Schizophrenia
- D Conversion disorder

**140 PSYCHIATRY**

The most characteristic electrolyte problem in refeeding syndrome is:

- A Hyperphosphataemia
- B Hyponatraemia
- C Hypercalcaemia
- D Hypophosphataemia

**141 PSYCHIATRY**

A patient with alcohol dependence presents with confusion, ataxia and ophthalmoplegia. The first drug to give is:

- A Disulfiram
- B Haloperidol
- C Intravenous glucose
- D Intravenous thiamine

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# Answer key

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One-line explanations follow each answer.

|    |          |                                                                                                                                      |
|----|----------|--------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <b>B</b> | Syringomyelia gives a cape-like dissociated sensory loss: pain and temperature lost, touch preserved.                                |
| 2  | <b>D</b> | Inferior leads (II, III, aVF) reflect the right coronary artery territory in most people.                                            |
| 3  | <b>D</b> | Spironolactone retains potassium and is not used in hyperkalaemia; calcium, insulin-dextrose and salbutamol are.                     |
| 4  | <b>A</b> | Anti-Smith (like anti-dsDNA) is highly specific for SLE; ANA is sensitive but not specific.                                          |
| 5  | <b>B</b> | Severe falciparum malaria is treated with IV artesunate.                                                                             |
| 6  | <b>C</b> | High-output failure occurs in thyrotoxicosis, beriberi, anaemia, Paget disease and AV fistula; aortic stenosis is pressure overload. |
| 7  | <b>D</b> | Diarrhoea causes a normal anion gap (hyperchloraemic) acidosis; DKA, methanol and lactic acidosis raise the gap.                     |
| 8  | <b>D</b> | Crohn disease is transmural with skip lesions; ulcerative colitis is mucosal and continuous.                                         |
| 9  | <b>C</b> | Kaposi sarcoma, non-Hodgkin lymphoma and invasive cervical carcinoma are AIDS-defining; melanoma is not.                             |
| 10 | <b>D</b> | Too rapid correction of chronic hyponatraemia causes osmotic demyelination (central pontine myelinolysis).                           |
| 11 | <b>D</b> | Bacterial meningitis: low glucose, high protein, neutrophils.                                                                        |
| 12 | <b>D</b> | Vitamin B12 is absorbed in the terminal ileum with intrinsic factor.                                                                 |
| 13 | <b>B</b> | Anti-centromere antibodies: limited cutaneous systemic sclerosis (CREST); anti-Scl-70: diffuse disease.                              |
| 14 | <b>D</b> | Infiltrative ophthalmopathy (exophthalmos) and pretibial myxoedema are specific to Graves disease.                                   |
| 15 | <b>A</b> | The regurgitant jet impinges on the anterior mitral leaflet to give a mid-diastolic apical rumble.                                   |
| 16 | <b>C</b> | Peaked T waves come first, followed by flattened P waves, wide QRS and a sine-wave pattern.                                          |
| 17 | <b>A</b> | Hemisection of the cord: ipsilateral corticospinal and dorsal column loss; contralateral spinothalamic loss.                         |
| 18 | <b>D</b> | Standard thrombolysis window is 4.5 hours after a non-contrast CT excludes haemorrhage.                                              |
| 19 | <b>D</b> | Anti-Scl-70 goes with diffuse disease and lung fibrosis; anti-centromere with limited disease.                                       |
| 20 | <b>D</b> | BI-RADS 5 means highly suggestive of malignancy (about 95% or more) and needs biopsy.                                                |
| 21 | <b>D</b> | Tension pneumothorax with shock is a clinical diagnosis treated at once by needle decompression, then a chest drain.                 |

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| 22 | <b>B</b> | Neurogenic shock gives hypotension with bradycardia (loss of sympathetic tone); other shock types give tachycardia.                          |
| 23 | <b>B</b> | Lugol iodine given before thyroidectomy in Graves disease reduces gland vascularity.                                                         |
| 24 | <b>B</b> | The ileocaecal region is the commonest site of abdominal tuberculosis.                                                                       |
| 25 | <b>D</b> | In ATLS the primary survey starts with airway and cervical spine protection.                                                                 |
| 26 | <b>B</b> | A Marjolin ulcer is a squamous cell carcinoma arising in a chronic scar or wound.                                                            |
| 27 | <b>C</b> | In hypospadias repair, chordee is corrected first, then urethroplasty, glanuloplasty and scrotoplasty.                                       |
| 28 | <b>A</b> | Papillary carcinoma (Orphan Annie eye nuclei, psammoma bodies) accounts for most thyroid cancers and spreads by lymphatics.                  |
| 29 | <b>B</b> | Beck triad is the classic sign set of cardiac tamponade.                                                                                     |
| 30 | <b>D</b> | Parkland: 4 mL/kg/% TBSA of Ringer lactate, half in the first 8 hours from the time of the burn.                                             |
| 31 | <b>D</b> | Charcot triad is acute cholangitis; Reynolds pentad adds hypotension and confusion.                                                          |
| 32 | <b>A</b> | Loss of the patellar reflex is the earliest sign of magnesium toxicity, followed by respiratory depression.                                  |
| 33 | <b>A</b> | Carboprost (PGF2 alpha) can cause bronchospasm and is avoided in asthma.                                                                     |
| 34 | <b>B</b> | Late decelerations indicate uteroplacental insufficiency; variable ones cord compression; early ones head compression.                       |
| 35 | <b>C</b> | Turner syndrome (45,X): streak gonads, primary amenorrhoea, raised FSH, poor breast development.                                             |
| 36 | <b>A</b> | Under the 2021 amendment, one provider is enough up to 20 weeks; two are needed for 20 to 24 weeks in eligible categories.                   |
| 37 | <b>A</b> | Combined oral contraceptives lower ovarian and endometrial cancer risk.                                                                      |
| 38 | <b>B</b> | Placenta praevia causes painless bleeding; abruption is painful.                                                                             |
| 39 | <b>D</b> | Current guidelines prefer letrozole over clomiphene for ovulation induction in PCOS.                                                         |
| 40 | <b>A</b> | Betamethasone or dexamethasone accelerates fetal lung maturity (surfactant production).                                                      |
| 41 | <b>C</b> | About 70% are in the ampulla; the isthmus is the next most common.                                                                           |
| 42 | <b>C</b> | Transposition of the great arteries is cyanotic with increased pulmonary blood flow; TOF, Ebstein and pulmonary atresia have decreased flow. |
| 43 | <b>B</b> | Younger age at first febrile seizure raises recurrence risk, as do low-grade fever and a short fever-to-seizure interval.                    |
| 44 | <b>B</b> | Benzathine penicillin G intramuscularly every 3 to 4 weeks is the standard secondary prophylaxis.                                            |
| 45 | <b>C</b> | Cystic fibrosis (CFTR gene, chromosome 7, delta F508) is diagnosed by a raised sweat chloride.                                               |
| 46 | <b>A</b> | TOF: VSD, pulmonary (right ventricular outflow) obstruction, overriding aorta and right ventricular hypertrophy.                             |

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| 47 | <b>D</b> | If the heart rate remains below 60 despite effective ventilation, begin compressions (3:1 with ventilation).                                     |
| 48 | <b>C</b> | Anaemia of chronic disease has high hepcidin, low serum iron, low TIBC and normal or high ferritin.                                              |
| 49 | <b>B</b> | CML shows marked leucocytosis with the full spectrum of myeloid cells, basophilia and the Philadelphia chromosome t(9;22).                       |
| 50 | <b>A</b> | CD40L deficiency blocks class switching, giving the hyper-IgM picture.                                                                           |
| 51 | <b>A</b> | Caspase 9 initiates the intrinsic pathway; caspase 8 the extrinsic; caspases 3 and 7 are executioners.                                           |
| 52 | <b>B</b> | Prader-Willi is loss of paternally derived 15q11-q13 (Angelman is the maternal deletion).                                                        |
| 53 | <b>C</b> | Hereditary spherocytosis: raised MCHC, increased osmotic fragility, negative direct Coombs test.                                                 |
| 54 | <b>B</b> | Toluidine blue stains mast cell granules metachromatically.                                                                                      |
| 55 | <b>B</b> | Classical Reed-Sternberg cells are CD15 and CD30 positive.                                                                                       |
| 56 | <b>A</b> | Burkitt lymphoma: t(8;14) c-MYC, sheets of lymphocytes with tingible-body macrophages.                                                           |
| 57 | <b>D</b> | Amyloid binds Congo red and shows apple-green birefringence.                                                                                     |
| 58 | <b>C</b> | Hereditary angioedema is C1 inhibitor deficiency, treated acutely with C1 inhibitor concentrate.                                                 |
| 59 | <b>D</b> | Imatinib inhibits the BCR-ABL tyrosine kinase (and KIT).                                                                                         |
| 60 | <b>B</b> | SGLT2 inhibitors cause glycosuria and genital mycotic infections.                                                                                |
| 61 | <b>C</b> | Lithium causes nephrogenic diabetes insipidus; it is excreted by the kidney and needs level monitoring.                                          |
| 62 | <b>A</b> | Acute dystonia from an antipsychotic is treated with a parenteral anticholinergic such as benztropine.                                           |
| 63 | <b>D</b> | Clozapine can cause agranulocytosis, so absolute neutrophil counts are monitored.                                                                |
| 64 | <b>C</b> | Bempedoic acid inhibits ATP citrate lyase, upstream of HMG-CoA reductase.                                                                        |
| 65 | <b>A</b> | Fondaparinux is a factor Xa inhibitor (anticoagulant), not an antiplatelet drug.                                                                 |
| 66 | <b>D</b> | Thalidomide is used in erythema nodosum leprosum, but is strictly contraindicated in pregnancy.                                                  |
| 67 | <b>B</b> | Digoxin immune Fab binds circulating digoxin in life-threatening toxicity.                                                                       |
| 68 | <b>D</b> | N-acetylcysteine limits NAPQI-related hepatotoxicity.                                                                                            |
| 69 | <b>A</b> | HLA-B*5701 predicts abacavir hypersensitivity (HLA-B*1502 predicts carbamazepine SJS in Asians).                                                 |
| 70 | <b>D</b> | After vaccination, anti-HBs is the only marker; HBsAg and anti-HBc are negative.                                                                 |
| 71 | <b>C</b> | Negri bodies are eosinophilic cytoplasmic inclusions in neurons (Purkinje cells, hippocampus) in rabies; CMV gives owl's eye nuclear inclusions. |
| 72 | <b>B</b> | EHEC (O157:H7) makes Shiga toxin, which causes haemolytic uraemic syndrome.                                                                      |
| 73 | <b>D</b> | Alcohol does not kill spores; autoclaving, ethylene oxide and prolonged glutaraldehyde do.                                                       |

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| 74 | <b>C</b> | Cryptosporidium oocysts are acid-fast on a modified acid-fast stain.                                                         |
| 75 | <b>B</b> | Single-dose liposomal amphotericin B (10 mg/kg) is the first-line kala-azar regimen in India.                                |
| 76 | <b>C</b> | CBNAAT detects mutations in the rpoB gene (rifampicin resistance).                                                           |
| 77 | <b>B</b> | Transmitted by chigger mites, often with an eschar; doxycycline is the drug of choice.                                       |
| 78 | <b>C</b> | Mucorales have broad aseptate hyphae; Aspergillus has septate hyphae branching at about 45 degrees.                          |
| 79 | <b>D</b> | Pompe disease (type II) is lysosomal acid alpha-glucosidase deficiency with cardiomegaly and hypotonia.                      |
| 80 | <b>C</b> | Xanthurenic acid excretion after a tryptophan load reflects vitamin B6 (pyridoxal phosphate) deficiency.                     |
| 81 | <b>C</b> | Dideoxynucleotides lack the 3' hydroxyl group, so no further nucleotide can be added.                                        |
| 82 | <b>C</b> | MSUD is a block in branched-chain keto-acid dehydrogenase, so leucine, isoleucine and valine are restricted.                 |
| 83 | <b>A</b> | Competitive inhibition raises apparent Km; Vmax is unchanged because excess substrate overcomes it.                          |
| 84 | <b>C</b> | Von Gierke disease (GSD type I) is glucose-6-phosphatase deficiency.                                                         |
| 85 | <b>D</b> | UGA normally a stop codon is recoded as selenocysteine using the SECIS element.                                              |
| 86 | <b>C</b> | Hypothermia shifts the curve to the left; acidosis, raised PCO2, raised 2,3-BPG and fever shift it to the right.             |
| 87 | <b>C</b> | Fluid leaving the PCT is isotonic with plasma whatever the ADH level; ADH acts later in the collecting duct.                 |
| 88 | <b>A</b> | The A band is the length of the thick filament and stays constant; the I band and H zone shorten.                            |
| 89 | <b>C</b> | The plateau (phase 2) is L-type Ca2+ influx balanced by K+ efflux.                                                           |
| 90 | <b>B</b> | Surfactant (mainly DPPC) lowers alveolar surface tension and is made by type II cells.                                       |
| 91 | <b>B</b> | The superior gluteal nerve supplies gluteus medius and minimus; the pelvis drops on the side opposite the weak (stance) hip. |
| 92 | <b>C</b> | Klumpke (C8-T1) paralyses the small hand muscles, giving a claw hand; Erb gives waiter's tip.                                |
| 93 | <b>B</b> | The optic radiation runs in the retrolenticular part; the auditory radiation runs in the sublentiform part.                  |
| 94 | <b>A</b> | Hemiballismus follows a lesion of the contralateral subthalamic nucleus.                                                     |
| 95 | <b>A</b> | Subdural bleeds come from torn bridging veins; epidural bleeds come from the middle meningeal artery.                        |
| 96 | <b>C</b> | DiGeorge syndrome is a third and fourth pharyngeal pouch defect (thymus and parathyroids).                                   |
| 97 | <b>B</b> | Froment sign tests adductor pollicis (ulnar nerve); the patient substitutes flexor pollicis longus.                          |
| 98 | <b>C</b> | The hypoglossal nerve leaves through the hypoglossal canal.                                                                  |

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| 99  | <b>B</b> | A larger sample reduces the standard error, so the confidence interval narrows.                                                      |
| 100 | <b>A</b> | PPV falls as prevalence falls; sensitivity and specificity do not change.                                                            |
| 101 | <b>C</b> | Rotavirus vaccine is contraindicated after intussusception (and in severe combined immunodeficiency).                                |
| 102 | <b>C</b> | Human rabies immunoglobulin is 20 IU/kg (equine 40 IU/kg), infiltrated into the wound.                                               |
| 103 | <b>D</b> | Multibacillary leprosy needs 12 months of multidrug therapy; paucibacillary 6 months.                                                |
| 104 | <b>C</b> | Needles and syringes with fixed needles go in the white translucent puncture-proof container (BMW Rules 2016).                       |
| 105 | <b>A</b> | Chi-square is for proportions; the paired t test is for before-after data on the same subjects.                                      |
| 106 | <b>A</b> | Mees lines (transverse white nail bands) are classically seen in arsenic poisoning.                                                  |
| 107 | <b>C</b> | Datura contains hyoscyamine, hyoscine and atropine, producing an anticholinergic toxidrome (dry, flushed, dilated pupils, delirium). |
| 108 | <b>A</b> | The medial end of the clavicle is among the last epiphyses to fuse, in the early-to-mid twenties.                                    |
| 109 | <b>B</b> | Atropine blocks muscarinic effects; pralidoxime reactivates cholinesterase.                                                          |
| 110 | <b>A</b> | Auditory pathway: cochlear nuclei, superior olive, lateral lemniscus, inferior colliculus, medial geniculate body, cortex.           |
| 111 | <b>A</b> | An antrochoanal polyp arises from the maxillary sinus and leaves through the middle meatus.                                          |
| 112 | <b>D</b> | The Dix-Hallpike manoeuvre provokes the nystagmus of benign paroxysmal positional vertigo.                                           |
| 113 | <b>B</b> | Posterior cricoarytenoid is the sole abductor (recurrent laryngeal nerve).                                                           |
| 114 | <b>A</b> | Otosclerosis causes conductive loss with a Carhart notch; noise-induced loss notches at 4 kHz.                                       |
| 115 | <b>C</b> | Atropine dilates the pupil and can precipitate angle-closure glaucoma.                                                               |
| 116 | <b>A</b> | Superior oblique: intorsion (primary), depression and abduction (secondary); supplied by the trochlear nerve.                        |
| 117 | <b>D</b> | Pain on eye movement, RAPD and a normal disc point to retrobulbar optic neuritis (often demyelinating).                              |
| 118 | <b>B</b> | Natamycin is the first-line topical antifungal; steroids worsen fungal ulcers.                                                       |
| 119 | <b>D</b> | Latanoprost-type drugs are once-daily and lower IOP by increasing uveoscleral outflow.                                               |
| 120 | <b>A</b> | Terrible triad: elbow dislocation with radial head and coronoid process fractures.                                                   |
| 121 | <b>C</b> | Codman triangle with sunburst periosteal reaction in a teenager is osteosarcoma.                                                     |
| 122 | <b>A</b> | Blood supply enters distally, so proximal pole fractures risk avascular necrosis and non-union.                                      |
| 123 | <b>D</b> | The anterior interosseous branch of the median nerve is most commonly injured (radial and ulnar less often).                         |
| 124 | <b>B</b> | With an advanced airway in adult CPR give about 10 breaths per minute (one every 6 seconds).                                         |

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| 125 | <b>C</b> | Sugammadex selectively encapsulates rocuronium and vecuronium.                                                                   |
| 126 | <b>A</b> | Bupivacaine is highly protein-bound and cardiotoxic; 20% lipid emulsion treats local anaesthetic systemic toxicity.              |
| 127 | <b>B</b> | Succinylcholine raises serum potassium by about 0.5 mmol/L; upregulated receptors in burns or denervation cause dangerous rises. |
| 128 | <b>B</b> | Bird-beak narrowing of the lower oesophagus on barium swallow is achalasia cardia.                                               |
| 129 | <b>A</b> | The banana sign (cerebellum) occurs with open neural tube defects and Chiari II malformation.                                    |
| 130 | <b>C</b> | Water is 0 HU, air about -1000 and dense bone about +1000; fat about -100.                                                       |
| 131 | <b>A</b> | Gas in the stomach and proximal duodenum with no distal gas; associated with Down syndrome.                                      |
| 132 | <b>A</b> | Gottron papules over the knuckles and heliotrope rash are signs of dermatomyositis.                                              |
| 133 | <b>B</b> | Erythrasma ( <i>Corynebacterium minutissimum</i> ) fluoresces coral red under Wood lamp.                                         |
| 134 | <b>A</b> | Pemphigus vulgaris: suprabasal acantholysis; bullous pemphigoid: subepidermal split.                                             |
| 135 | <b>D</b> | Pemphigus: intercellular IgG (desmoglein 3); pemphigoid: linear basement membrane; dermatitis herpetiformis: granular IgA.       |
| 136 | <b>B</b> | Paucibacillary: rifampicin plus dapsone for 6 months; multibacillary adds clofazimine for 12 months.                             |
| 137 | <b>A</b> | Lorazepam (glucuronidated, no active metabolites) is preferred when liver function is poor.                                      |
| 138 | <b>B</b> | A fixed belief that one is dead or organs are missing is a nihilistic delusion (Cotard syndrome).                                |
| 139 | <b>D</b> | La belle indifference (unconcern about a dramatic deficit) is classically linked with conversion disorder.                       |
| 140 | <b>D</b> | Insulin-driven cellular uptake of phosphate (also potassium and magnesium) causes hypophosphataemia.                             |
| 141 | <b>D</b> | Wernicke encephalopathy; give thiamine before or with glucose.                                                                   |