



FINDMYBRANCH

FMGE High-Yield Topic Guide

Foreign medical graduates | topics and questions that repeated in past papers

14

sessions read
2017 Dec to 2025 Dec

260

repeated topics
sorted by subject

106

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.

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 14 sessions.

Recent

Also found in the 2025 June or 2025 December sessions.

x of 14

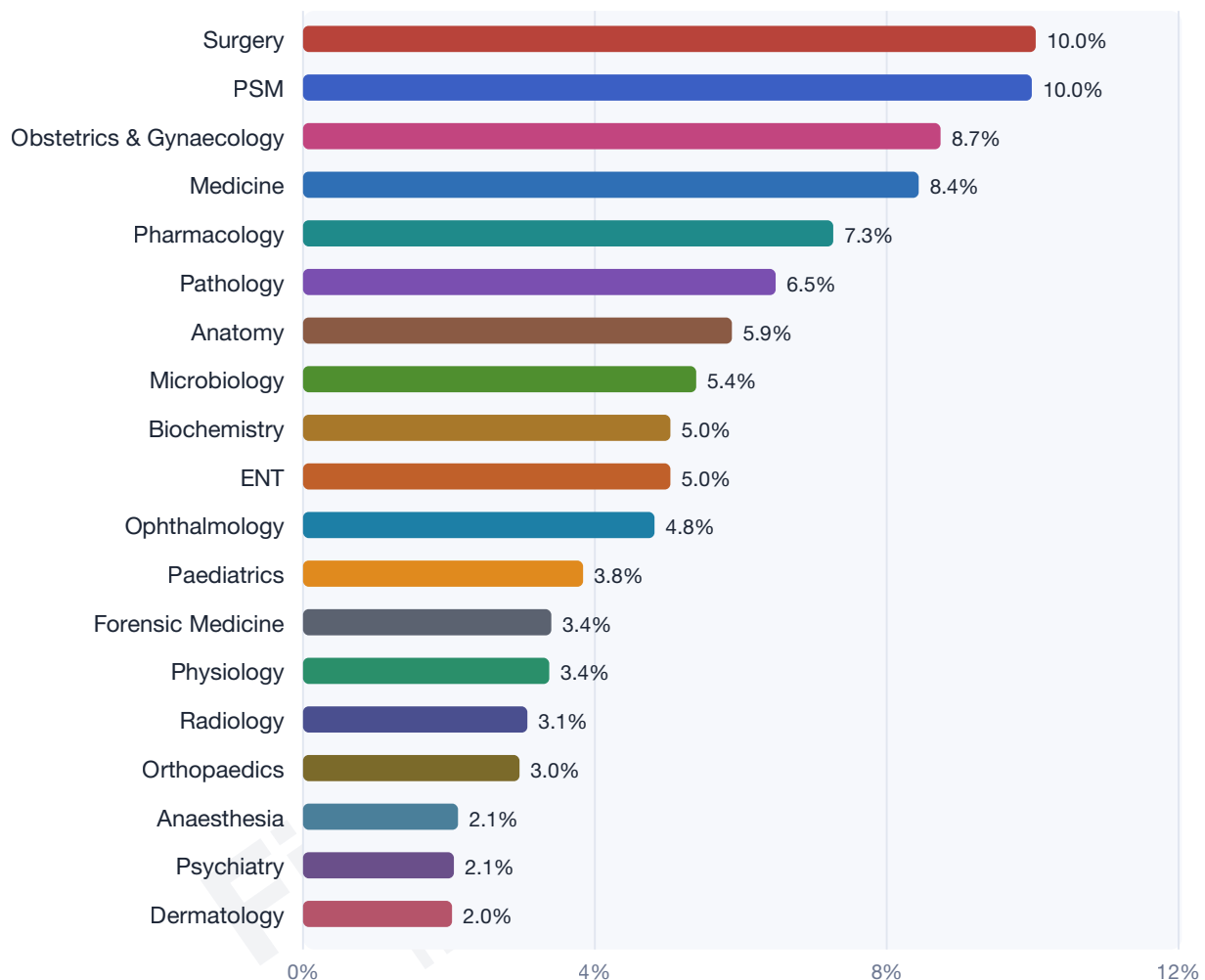
Number of FMGE sessions (December 2017 to December 2025) in which the topic was found. A topic counts once per session.

How much to trust the counts

- NBEMS does not publish FMGE question papers. Everything here is built from candidates' memory-based recall papers for 14 sessions; three sessions (2023 June, 2023 December, 2024 December) could not be found and are missing.
- Topics were assigned by reading each question and merged into chapter-level topics, so counts are indicative, not exact. Recall 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

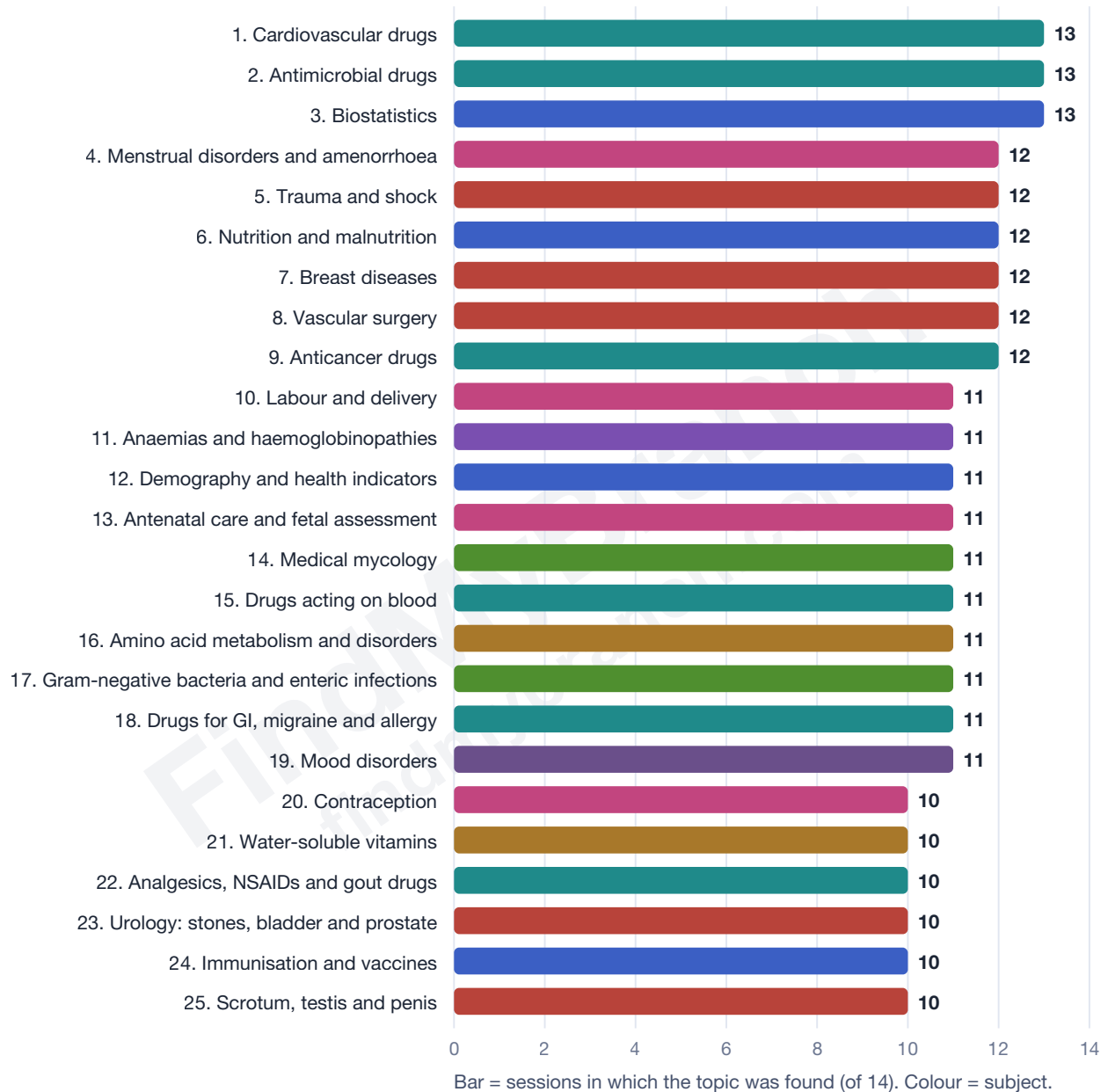
Share of the questions found in each subject across the sessions read. Pathology, Pharmacology, Surgery, PSM and Medicine carry the largest blocks.



Shares are of all 3,674 recalled questions read. Picture-based questions are counted under their subject but could not be matched to a topic.

At a glance: the 25 most repeated topics

Topics found in the most sessions out of 14. Broad topic groups (for example cardiovascular drugs or biostatistics) naturally appear more often than narrow ones.



What was read

Session labels follow the month the paper was sat. Dates were inferred from the compiled files and may be off by a session.

Session	Coverage	Questions read	Matched to a topic
2017 Dec	Full recall paper	289	281
2018 Jun	Full recall paper	253	249
2018 Dec	Full recall paper	241	223
2019 Jun	Full recall paper	225	208
2019 Dec	Full recall paper	241	212
2020 Aug	Full recall paper	276	197
2020 Dec	Full recall paper	239	163
2021 Jun	Full recall paper	279	217
2021 Dec	Full recall paper	267	215
2022 Jun	Full recall paper	244	199
2022 Dec	Full recall paper	285	230
2024 Jun	Full recall paper	286	239
2025 Jun	Full recall paper	265	229
2025 Dec	Full recall paper	284	218

Honest limits. Recalled papers repeat questions across shifts and some questions are lost or reworded. Picture-based questions could not be matched to a topic. Missing sessions: 2023 June, 2023 December and 2024 December. Treat every number as indicative.



Medicine

8.4% of questions found | 27 repeated topics | 4 marked must know

Topic	Sessions of 14	Years seen
Adrenal, pituitary and endocrine disorders Must know Recent	10 	2017, 18, 19, 20, 21, 22, 25
Rheumatic fever and valvular heart disease Must know Recent	10 	2017, 18, 19, 20, 21, 22, 25
Connective tissue diseases and gout Must know Recent	9 	2017, 18, 19, 20, 21, 22, 25
Diabetes mellitus and dyslipidaemia Must know	9 	2017, 18, 19, 20, 21, 22, 24
Neuromuscular junction and muscle disorders Recent	8 	2018, 21, 22, 24, 25
Lung cancer and pleural diseases	8 	2017, 18, 19, 20, 21, 22
Liver diseases and hepatitis Recent	8 	2018, 20, 21, 22, 25
Kidney diseases Recent	7 	2017, 18, 19, 20, 22, 25
COPD, asthma and lung function Recent	7 	2017, 18, 21, 22, 24, 25
Stroke and cerebrovascular disease Recent	7 	2018, 19, 20, 21, 22, 25
Acid-base and electrolyte disorders	6 	2017, 19, 20, 21, 22
Malabsorption and celiac disease	6 	2018, 19, 20, 21, 24
Pericardial disease	6 	2017, 18, 21, 22

Topic	Sessions of 14	Years seen
Plasma cell and other haematological disorders Recent	6 	2019, 20, 22, 24, 25
Neurological signs and miscellaneous disorders	5 	2017, 18, 19, 22, 24
Thyroid disorders Recent	5 	2017, 21, 22, 25

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

High-yield one-liners

Rheumatic fever and valvular heart disease

10/14 sessions

- Jones major criteria: carditis, migratory polyarthritis, Sydenham chorea, erythema marginatum and subcutaneous nodules; erythema nodosum is not one.
- Preceding group A streptococcal infection is shown by raised or rising ASO titre or positive throat culture.
- In mitral stenosis, a shorter A2-opening snap interval and longer diastolic murmur indicate greater severity.
- Modified Duke criteria diagnose infective endocarditis; major criteria are typical positive blood cultures and echocardiographic endocardial involvement.

Neuromuscular junction and muscle disorders

8/14 sessions

- Myasthenia gravis: antibodies to acetylcholine receptors cause fatigable weakness, ptosis and diplopia that worsen by evening.
- Myasthenia gravis is associated with thymoma or thymic hyperplasia; anticholinesterases like neostigmine or pyridostigmine improve weakness.
- Lambert-Eaton syndrome: antibodies to presynaptic voltage-gated calcium channels, strength improves with repeated effort, linked to small cell lung cancer.
- Dermatomyositis: proximal muscle weakness, heliotrope rash on eyelids, Gottron papules over knuckles and raised CK.

Stroke and cerebrovascular disease

7/14 sessions

- Non-contrast CT head is the first investigation in acute stroke to exclude haemorrhage before thrombolysis.
- Sudden thunderclap headache with neck stiffness suggests subarachnoid haemorrhage, most often from a ruptured berry aneurysm.
- Oral nimodipine is given in subarachnoid haemorrhage to reduce delayed ischaemia from vasospasm.
- Transient ischaemic attack is a focal deficit that resolves completely, usually within an hour, without infarction on imaging.

Acid-base and electrolyte disorders

6/14 sessions

- Anion gap = $\text{Na} - (\text{Cl} + \text{HCO}_3)$; it is raised in DKA, lactic acidosis, renal failure and some poisonings.
- In hyperkalaemia with ECG changes, IV calcium gluconate is given first to stabilise the cardiac membrane.
- Peaked T waves are the earliest ECG sign of hyperkalaemia; U waves and flat T waves suggest hypokalaemia.
- Gastric outlet obstruction causes hypochloraemic hypokalaemic metabolic alkalosis; correct with normal saline and potassium.



Surgery

10.0% of questions found | 20 repeated topics | 9 marked must know

Topic	Sessions of 14	Years seen
Trauma and shock Must know Recent	12 	2017, 18, 19, 20, 21, 22, 25
Breast diseases Must know Recent	12 	2017, 18, 19, 20, 21, 22, 24, 25
Vascular surgery Must know Recent	12 	2017, 18, 19, 20, 21, 22, 24, 25
Urology: stones, bladder and prostate Must know Recent	10 	2017, 18, 19, 21, 22, 25
Scrotum, testis and penis Must know Recent	10 	2018, 19, 20, 21, 22, 24, 25
Oesophageal disorders Must know Recent	10 	2017, 18, 19, 20, 21, 22, 24, 25
Thoracic and cardiac surgery Must know Recent	10 	2018, 19, 21, 22, 24, 25
Burns, grafts and wound care Must know Recent	9 	2017, 19, 21, 22, 24, 25
Small bowel, appendix and acute abdomen Must know Recent	9 	2017, 18, 19, 20, 21, 24, 25
Gallbladder and biliary disease Recent	8 	2018, 19, 20, 21, 22, 25
Thyroid, neck swellings and parathyroid Recent	8 	2018, 19, 21, 22, 24, 25
Hernia and abdominal wall Recent	8 	2017, 18, 21, 22, 24, 25

Topic	Sessions of 14	Years seen
GI tumours and neuroendocrine tumours Recent	7 	2017, 18, 19, 21, 22, 24, 25
Paediatric surgery Recent	7 	2017, 19, 21, 22, 24, 25
Stomach and duodenum disorders	6 	2018, 19, 20, 21, 22
Colorectal and anal disorders Recent	6 	2017, 18, 21, 22, 25

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

High-yield one-liners

Trauma and shock

12/14 sessions

- Class III haemorrhagic shock means 30-40% blood volume loss; systolic BP first falls in this class.
- SIRS needs two of: abnormal temperature, heart rate >90/min, respiratory rate >20/min, abnormal WBC count.
- Non-contrast CT (NCCT) head is the investigation of choice in acute head injury.

Breast diseases

12/14 sessions

- Fibroadenoma is the commonest benign breast tumour: firm, painless, highly mobile lump in young women.
- Paget's disease of the nipple: eczema-like change starting on the nipple, signalling underlying breast carcinoma.
- Triple assessment = clinical examination + imaging (mammography/ultrasound) + tissue diagnosis (FNAC or core biopsy).
- Luminal A (ER/PR positive, HER2 negative, low Ki-67) has the best prognosis; triple-negative has a poor one.

Vascular surgery

12/14 sessions

- Perthes test checks deep vein patency before varicose vein surgery; Brodie-Trendelenburg tests saphenofemoral and perforator incompetence.
- Stripping the long saphenous vein below the knee risks saphenous nerve injury, causing medial leg numbness.
- Abdominal aortic aneurysm: small ones are kept under surveillance; elective repair is usually advised at 5.5 cm or more.

Urology: stones, bladder and prostate

10/14 sessions

- A transplanted kidney is placed extraperitoneally in the iliac fossa.
- Renal cell carcinoma classic triad: haematuria, flank pain and palpable flank mass.
- Benign prostatic hyperplasia arises in the transition zone; prostate carcinoma mostly in the peripheral zone.

Scrotum, testis and penis

10/14 sessions

- Bell-clapper deformity (high tunica vaginalis investment) predisposes to testicular torsion, a surgical emergency.
- Prehn sign: lifting the testis relieves pain in epididymo-orchitis but not in torsion.
- Priapism is a persistent erection lasting over 4 hours, unrelated to sexual stimulation.
- Seminoma is the commonest testicular germ cell tumour and is highly radiosensitive.

Oesophageal disorders

10/14 sessions

- Boerhaave syndrome: full-thickness oesophageal rupture after forceful vomiting, with chest pain and pneumomediastinum.
- Zenker's diverticulum is a pulsion diverticulum through Killian's dehiscence, above the cricopharyngeus.
- 24-hour ambulatory pH monitoring is the gold standard investigation for GERD.
- Barrett's oesophagus (intestinal metaplasia) predisposes to oesophageal adenocarcinoma.

Thoracic and cardiac surgery

10/14 sessions

- Thymoma is the commonest anterior mediastinal tumour and is associated with myasthenia gravis.
- Neurogenic tumours are the commonest posterior mediastinal tumours.
- Tension pneumothorax is a clinical diagnosis: immediate needle decompression, then intercostal chest drain.
- Empyema is treated with antibiotics plus intercostal tube drainage; decortication for organised empyema.

Small bowel, appendix and acute abdomen

9/14 sessions

- Crohn's disease: transmural, skip lesions, strictures and fistulae; rectum usually spared.
- Ulcerative colitis: continuous mucosal inflammation starting at the rectum, with crypt abscesses.
- Alvarado score totals 10; right iliac fossa tenderness and leucocytosis score 2 points each.
- McBurney's point lies at the junction of lateral third and medial two-thirds of the spino-umbilical line.



Obstetrics & Gynaecology

8.7% of questions found | 21 repeated topics | 7 marked must know

Topic	Sessions of 14	Years seen
Menstrual disorders and amenorrhoea Must know Recent	12 	2017, 18, 19, 20, 21, 22, 24, 25
Labour and delivery Must know Recent	11 	2017, 18, 19, 20, 21, 22, 24, 25
Antenatal care and fetal assessment Must know Recent	11 	2017, 18, 19, 20, 21, 22, 24, 25
Contraception Must know Recent	10 	2017, 18, 19, 20, 21, 24, 25
Abortion and MTP Act Must know Recent	10 	2017, 18, 19, 20, 21, 22, 24, 25
Ovarian disorders, PCOS and gynaecological tumours Must know	10 	2017, 18, 19, 20, 21, 22, 24
Ectopic pregnancy Must know Recent	9 	2018, 19, 20, 21, 22, 24, 25
Puerperium and lactation Recent	8 	2017, 20, 21, 22, 24, 25
Endometriosis Recent	8 	2018, 19, 20, 22, 25
Genital tract infections Recent	7 	2017, 18, 19, 20, 21, 22, 25
Infertility	7 	2017, 18, 19, 20, 21
Medical disorders in pregnancy Recent	7 	2017, 18, 20, 21, 24, 25

Topic	Sessions of 14	Years seen
Fibroids and benign uterine disorders	7 	2017, 18, 20, 21, 22, 24
Hypertensive disorders of pregnancy	7 	2019, 20, 21, 22, 24
Cervical cancer and screening Recent	7 	2018, 20, 21, 22, 25
Antepartum haemorrhage and placenta Recent	5 	2018, 19, 20, 25

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

High-yield one-liners

Labour and delivery

11/14 sessions

- A previous caesarean scar is the commonest cause of uterine rupture; suspected rupture needs immediate laparotomy.
- Fetal heart rate abnormality (bradycardia) is the most common sign of uterine rupture.
- Strong cord traction before the uterus contracts can cause acute uterine inversion.

Antenatal care and fetal assessment

11/14 sessions

- Naegle's rule: expected date of delivery = first day of last menstrual period + 9 months + 7 days.
- In the second half of pregnancy fetal urine is the main source of amniotic fluid.
- Parvovirus B19 causes fetal anaemia and non-immune hydrops fetalis.
- The double decidual sac sign on ultrasound indicates an early intrauterine gestational sac.

Contraception

10/14 sessions

- Combined estrogen-progestogen methods (pill, patch, ring) are contraindicated with past or current venous thromboembolism.
- Copper IUD is an effective emergency contraceptive when inserted within 5 days of unprotected intercourse.
- Nonoxynol-9 is the most widely used spermicide.

Abortion and MTP Act

10/14 sessions

- Commonest cause of first-trimester miscarriage is chromosomal abnormality; recurrent painless second-trimester loss suggests cervical incompetence.
- Threatened abortion: slight bleeding, closed os, uterine size matching gestation, live fetus; managed conservatively.
- Early medical abortion uses mifepristone followed by misoprostol.
- Cervical incompetence is treated by cervical cerclage (McDonald or Shirodkar stitch).

Ovarian disorders, PCOS and gynaecological tumours

10/14 sessions

- PCOS is the commonest cause of hirsutism; it shows hyperandrogenism, anovulation and a raised LH:FSH ratio.
- Rotterdam criteria for PCOS need two of: oligo/anovulation, hyperandrogenism, polycystic ovaries on ultrasound.
- Laparoscopic ovarian drilling is used for clomiphene-resistant PCOS.
- Endometrial cancer risk rises with unopposed estrogen, obesity, nulliparity, late menopause and PCOS; multiparity is protective.

Ectopic pregnancy

9/14 sessions

- The ampulla of the fallopian tube is the commonest site of ectopic pregnancy.
- Isthmic ectopic ruptures earliest; interstitial (cornual) ectopic ruptures latest, with heavy bleeding.
- Amenorrhoea, abdominal pain and shock with positive hCG suggests ruptured ectopic; treat with urgent laparotomy.
- Methotrexate suits a stable, unruptured ectopic with low beta-hCG and no fetal cardiac activity.

Puerperium and lactation

8/14 sessions

- After-pains during breastfeeding are caused by oxytocin released on nipple stimulation.
- Lochia changes in sequence: lochia rubra, then serosa, then alba.
- Breastfeeding should be started within one hour of birth.
- Classic galactosaemia in the infant is an absolute contraindication to breastfeeding.



Paediatrics

3.8% of questions found | 13 repeated topics | 2 marked must know

Topic	Sessions of 14	Years seen
Neonatal care and resuscitation Must know Recent	10 	2017, 18, 20, 21, 22, 25
Growth and development Must know Recent	9 	2017, 18, 21, 22, 24, 25
Nutrition and malnutrition	8 	2017, 18, 19, 21, 22, 24
Paediatric respiratory infections and IMNCI Recent	8 	2017, 19, 20, 21, 22, 24, 25
Paediatric renal and fluid disorders Recent	7 	2019, 20, 21, 22, 25
Congenital heart disease	7 	2017, 18, 19, 20, 21, 24
Neonatal jaundice and liver disorders Recent	6 	2017, 18, 19, 20, 21, 25
Genetic and chromosomal syndromes Recent	6 	2017, 21, 22, 24, 25
Paediatric neurology and seizures Recent	6 	2020, 21, 22, 24, 25
Diarrhoea and dehydration	5 	2017, 18, 19, 21, 24
Neonatal and paediatric endocrine disorders Recent	5 	2019, 21, 24, 25
Childhood exanthems and infections Recent	4 	2018, 20, 21, 25
Neonatal sepsis and infections	4 	2017, 18, 19

High-yield one-liners

Neonatal care and resuscitation

10/14 sessions

- Resuscitation of a term newborn starts with room air (21% oxygen).
- An apnoeic or gasping baby, or heart rate below 100/min, needs bag-and-mask positive pressure ventilation.
- Chest compressions start if heart rate stays below 60/min despite 30 seconds of effective ventilation.

Growth and development

9/14 sessions

- Breast budding (thelarche) is usually the first sign of puberty in girls.
- A child copies a circle at 3 years, a cross at 4 years and a triangle at 5 years.
- Familial short stature: normal growth velocity and bone age equals chronological age; constitutional delay has delayed bone age.
- Palmar grasp precedes transfer of objects, which precedes pincer grasp.

Nutrition and malnutrition

8/14 sessions

- Severe acute malnutrition: MUAC below 11.5 cm, weight-for-height below -3 SD, or bilateral pitting oedema.
- Height-for-age (stunting) reflects chronic malnutrition; weight-for-height (wasting) reflects acute malnutrition.
- Bitot's spots on the bulbar conjunctiva are a sign of vitamin A deficiency.
- Kwashiorkor has oedema; marasmus shows severe wasting without oedema.

Paediatric respiratory infections and IMNCI

8/14 sessions

- IMNCI fast breathing: 60/min or more under 2 months, 50 or more at 2-12 months, 40 or more at 1-5 years.
- Bronchiolitis, commonly due to RSV, causes first-episode wheeze in infants with hyperinflation on chest X-ray.
- Croup (parainfluenza virus) gives barking cough, inspiratory stridor and a steeple sign on X-ray.
- Acute epiglottitis, classically Haemophilus influenzae type b, shows the thumb sign on lateral neck X-ray.

Paediatric renal and fluid disorders

7/14 sessions

- Minimal change disease is the commonest cause of nephrotic syndrome in children and is usually steroid-responsive.
- Holliday-Segar maintenance fluid: 100 mL/kg for first 10 kg, 50 mL/kg next 10 kg, 20 mL/kg thereafter, per day.
- Post-streptococcal glomerulonephritis follows throat or skin (impetigo) infection, with haematuria, oedema, hypertension and low C3.
- For nocturnal enuresis, the bed-wetting alarm is the most effective long-term first-line treatment.

Congenital heart disease

7/14 sessions

- Patent ductus arteriosus gives a continuous machinery murmur; indomethacin or ibuprofen closes it in preterms.
- Atrioventricular septal defect is the commonest cardiac lesion in Down syndrome; VSD is commonest CHD overall.
- Tetralogy of Fallot: VSD, overriding aorta, pulmonary (RV outflow) stenosis, right ventricular hypertrophy; boot-shaped heart.
- Coarctation of aorta: radio-femoral delay, upper limb hypertension, rib notching; associated with Turner syndrome.

Neonatal jaundice and liver disorders

6/14 sessions

- Jaundice appearing within the first 24 hours is always pathological; haemolytic disease (Rh/ABO) is the commonest cause.
- Neonatal jaundice becomes clinically visible at about 5 mg/dL serum bilirubin.
- Biliary atresia: conjugated jaundice, pale stools, dark urine; early Kasai portoenterostomy gives the best results.
- Phototherapy converts bilirubin into water-soluble isomers such as lumirubin that are excreted without conjugation.

Genetic and chromosomal syndromes

6/14 sessions

- Down syndrome is trisomy 21, usually from maternal meiotic non-disjunction; risk rises with maternal age.
- Patau syndrome (trisomy 13): cleft lip and palate, polydactyly, microphthalmia, holoprosencephaly.
- Edwards syndrome (trisomy 18): clenched fists with overlapping fingers and rocker-bottom feet.
- Cystic fibrosis is due to CFTR mutation; the sweat chloride test is the diagnostic test.

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Pathology

6.5% of questions found | 14 repeated topics | 4 marked must know

Topic	Sessions of 14	Years seen
Anaemias and haemoglobinopathies Must know Recent	11 	2017, 18, 19, 21, 22, 24, 25
Hypersensitivity and autoimmunity Must know Recent	9 	2017, 19, 20, 21, 22, 24, 25
Neoplasia and carcinogenesis Must know Recent	9 	2017, 18, 20, 21, 22, 25
CNS tumours and neuropathology Must know Recent	9 	2017, 19, 20, 22, 24, 25
Genetic and chromosomal disorders Recent	8 	2018, 19, 20, 21, 22, 24, 25
Leukaemias and lymphomas Recent	8 	2020, 21, 22, 25
Inflammation Recent	8 	2017, 19, 20, 21, 22, 24, 25
Renal pathology	7 	2017, 18, 19, 20, 21, 22
Cardiovascular pathology	7 	2018, 19, 20, 21, 22, 24
Lung pathology Recent	6 	2017, 19, 21, 22, 25
Gastrointestinal and liver pathology Recent	6 	2017, 20, 21, 22, 25
Cell injury and cell death Recent	6 	2017, 19, 20, 22, 24, 25
Transplant immunology and rejection Recent	6 	2018, 19, 20, 22, 25

Topic	Sessions of 14	Years seen
Bleeding and coagulation disorders	5	2018, 20, 22, 25
Recent		

High-yield one-liners

Anaemias and haemoglobinopathies

11/14 sessions

- Iron deficiency anaemia: low serum ferritin, low serum iron, low transferrin saturation, but raised total iron binding capacity.
- Low serum ferritin is the most useful single test for depleted iron stores.
- Vitamin B12 or folate deficiency causes macrocytic normochromic (megaloblastic) anaemia with hypersegmented neutrophils.
- Reticulocytes are counted using supravital stains such as new methylene blue or brilliant cresyl blue.

Hypersensitivity and autoimmunity

9/14 sessions

- Type I (IgE, mast cell degranulation): anaphylaxis to bee sting, allergic asthma, hay fever.
- Type II (antibody against cell or tissue antigen): pernicious anaemia, Goodpasture syndrome, Graves disease, myasthenia gravis.
- Type III (immune complex): serum sickness, Arthus reaction, SLE, post-streptococcal glomerulonephritis.
- Type IV (T-cell mediated, delayed): tuberculin test, contact dermatitis, granulomatous inflammation.

Neoplasia and carcinogenesis

9/14 sessions

- Anaplasia means lack of differentiation and is a hallmark of malignancy.
- Retinoblastoma results from loss of both alleles of the RB tumour suppressor gene on chromosome 13q14.
- TP53, the 'guardian of the genome', is the most frequently mutated gene in human cancers.
- Laminin is the most abundant glycoprotein in basement membranes.

CNS tumours and neuropathology

9/14 sessions

- Medulloblastoma is the commonest malignant embryonal brain tumour of children, typically arising in the cerebellum.
- Metastases are the commonest brain tumours in adults; lung cancer is the most common primary.
- Meningioma is a dura-attached tumour showing whorled cells and psammoma bodies.
- Berry aneurysms arise at circle of Willis branch points with defective media; rupture causes subarachnoid haemorrhage.

Genetic and chromosomal disorders

8/14 sessions

- Consanguinity mainly increases autosomal recessive disorders such as sickle cell anaemia, thalassaemia, cystic fibrosis and Wilson disease.
- X-linked recessive disorders include G6PD deficiency, haemophilia A and B, and Duchenne muscular dystrophy.
- Autosomal dominant disorders include von Willebrand disease, hereditary spherocytosis, Marfan syndrome and adult polycystic kidney disease.
- Turner syndrome (45,X): short stature, primary amenorrhoea, widely spaced nipples, webbed neck and coarctation of aorta.

Leukaemias and lymphomas

8/14 sessions

- Acute lymphoblastic leukaemia is the commonest childhood leukaemia: pallor, fever, bleeding, bone pain, hepatosplenomegaly.
- CML carries the Philadelphia chromosome t(9;22), forming the BCR-ABL tyrosine kinase targeted by imatinib.
- Auer rods are characteristic of acute myeloid leukaemia, abundant in acute promyelocytic leukaemia with t(15;17).

Inflammation

8/14 sessions

- Mast cells are the richest source of preformed histamine, the main early mediator of vascular permeability.
- Kupffer cells are the resident macrophages of the liver.
- Granulomas are collections of epithelioid macrophages; caseating necrotising granulomas strongly suggest tuberculosis.
- Faecal calprotectin and lactoferrin are neutrophil-derived markers of intestinal inflammation.

Renal pathology

7/14 sessions

- Goodpasture syndrome: anti-GBM antibodies against type IV collagen cause crescentic glomerulonephritis plus pulmonary haemorrhage.
- Post-streptococcal glomerulonephritis is the classic nephritic syndrome: haematuria, hypertension, oliguria and low C3.
- Minimal change disease is the commonest cause of nephrotic syndrome in children and responds well to steroids.
- Tamm-Horsfall protein (uromodulin) forms the matrix of urinary casts.



Pharmacology

7.3% of questions found | 18 repeated topics | 9 marked must know

Topic	Sessions of 14	Years seen
Cardiovascular drugs Must know Recent	13 	2017, 18, 19, 20, 21, 22, 24, 25
Antimicrobial drugs Must know Recent	13 	2017, 18, 19, 20, 21, 22, 24, 25
Anticancer drugs Must know Recent	12 	2017, 18, 19, 20, 21, 22, 24, 25
Drugs acting on blood Must know Recent	11 	2017, 18, 19, 20, 21, 22, 24, 25
Drugs for GI, migraine and allergy Must know Recent	11 	2017, 18, 19, 20, 21, 22, 24, 25
Analgesics, NSAIDs and gout drugs Must know Recent	10 	2017, 18, 19, 20, 21, 22, 25
Hormones and endocrine drugs Must know Recent	10 	2017, 18, 19, 20, 21, 22, 25
Autonomic nervous system drugs Must know Recent	10 	2017, 18, 19, 20, 21, 22, 24, 25
Drugs for respiratory diseases Must know Recent	10 	2018, 19, 20, 21, 22, 25
CNS and psychiatric drugs Recent	8 	2018, 19, 20, 21, 22, 24, 25
Antidiabetic drugs and insulin Recent	8 	2018, 19, 21, 24, 25
Antimalarial and antiprotozoal drugs Recent	8 	2017, 19, 20, 21, 24, 25

Topic	Sessions of 14	Years seen
Adverse effects, interactions and pregnancy Recent	6 	2018, 19, 20, 21, 24, 25
Antiepileptic drugs Recent	6 	2019, 20, 21, 24, 25
General pharmacology	5 	2018, 19, 20, 22
Antiviral drugs Recent	5 	2017, 18, 19, 24, 25

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

High-yield one-liners

Cardiovascular drugs

13/14 sessions

- Methyldopa acts as a central alpha-2 agonist and is a safe antihypertensive in pregnancy.
- Alpha-1 blockers such as prazosin cause first-dose postural hypotension; give the first dose at bedtime.
- Thiazides block the Na-Cl symporter in the early distal tubule; loop diuretics block Na-K-2Cl in thick ascending limb.
- ACE inhibitors cause dry cough and angioedema from bradykinin accumulation and are contraindicated in pregnancy.

Antimicrobial drugs

13/14 sessions

- Linezolid binds 23S rRNA of the 50S subunit, blocking formation of the 70S initiation complex.
- Fluoroquinolones lower the seizure threshold and are best avoided in patients with epilepsy.
- Single-dose ceftriaxone is the preferred meningococcal contact prophylaxis in pregnancy.
- Cotrimoxazole is the drug of choice for Pneumocystis pneumonia and treats Isospora and toxoplasmosis.

Anticancer drugs

12/14 sessions

- Anthracyclines (doxorubicin) cause dose-related cardiomyopathy; dexrazoxane reduces this cardiotoxicity.
- Cyclophosphamide causes haemorrhagic cystitis, prevented by mesna.
- Filgrastim (G-CSF) shortens chemotherapy-induced neutropenia.
- Rituximab is an anti-CD20 monoclonal antibody used in B-cell lymphomas.

Drugs acting on blood

11/14 sessions

- Apixaban and rivaroxaban inhibit factor Xa directly; fondaparinux inhibits it indirectly through antithrombin.
- Dabigatran is an oral direct thrombin inhibitor; idarucizumab is its specific reversal agent.
- Warfarin inhibits vitamin K epoxide reductase, is monitored by PT/INR and is needed after mechanical valve replacement.
- Heparin potentiates antithrombin, is monitored by aPTT and is reversed by protamine sulfate.

Drugs for GI, migraine and allergy

11/14 sessions

- Hyoscine (scopolamine) is the most effective drug for preventing motion sickness.
- 5-HT₃ antagonists like ondansetron prevent cisplatin-induced vomiting; the NK₁ antagonist aprepitant is often added.
- Proton pump inhibitors such as omeprazole are the drugs of choice for Zollinger-Ellison syndrome.
- Migraine prophylaxis: propranolol, amitriptyline, flunarizine, topiramate, valproate; triptans are for acute attacks.

Analgesics, NSAIDs and gout drugs

10/14 sessions

- Allopurinol and febuxostat inhibit xanthine oxidase and are used for long-term lowering of uric acid.
- Naloxone is the specific antagonist used to reverse opioid overdose.
- Acute gout is treated with NSAIDs, colchicine or steroids; low-dose aspirin raises serum uric acid.
- Indomethacin or ibuprofen closes a patent ductus arteriosus in preterm babies by inhibiting prostaglandin synthesis.

Hormones and endocrine drugs

10/14 sessions

- Propylthiouracil is preferred for hyperthyroidism in the first trimester; carbimazole or methimazole later in pregnancy.
- Desmopressin is the drug of choice for central (neurogenic) diabetes insipidus.
- Hydrocortisone is the shortest-acting glucocorticoid; dexamethasone and betamethasone are long-acting.

Autonomic nervous system drugs

10/14 sessions

- Succinylcholine is the shortest-acting neuromuscular blocker and the usual choice for rapid sequence intubation.
- Edrophonium (Tensilon test) helps distinguish myasthenic crisis from cholinergic crisis.
- Low-dose dopamine stimulates D₁ receptors and increases renal blood flow.
- Dale's vasomotor reversal: after alpha blockade, adrenaline lowers blood pressure through unopposed beta-2 vasodilation.



Microbiology

5.4% of questions found | 12 repeated topics | 4 marked must know

Topic	Sessions of 14	Years seen
Medical mycology Must know Recent	11 	2017, 18, 19, 20, 21, 22, 25
Gram-negative bacteria and enteric infections Must know Recent	11 	2017, 18, 19, 20, 21, 24, 25
RNA viruses and general virology Must know Recent	10 	2017, 18, 19, 20, 21, 22, 24, 25
Other bacterial infections Must know Recent	9 	2017, 18, 19, 21, 22, 24, 25
General bacteriology	8 	2018, 19, 21, 22, 24
Protozoal parasites Recent	8 	2018, 19, 20, 21, 22, 24, 25
Immunology Recent	8 	2017, 18, 19, 21, 22, 25
DNA viruses Recent	7 	2017, 18, 19, 20, 21, 25
Gram-positive bacteria Recent	7 	2018, 19, 21, 22, 25
Sterilisation and infection control	6 	2017, 18, 19, 20, 22
Helminths Recent	6 	2017, 18, 19, 22, 25
Rabies virus Recent	4 	2018, 19, 20, 25

High-yield one-liners

Medical mycology

11/14 sessions

- Mucormycosis (*Rhizopus*, *Mucor*) shows broad aseptate hyphae branching at right angles; affects diabetics with black necrotic eschar.
- *Aspergillus* shows narrow septate hyphae with acute-angle dichotomous branching.
- *Pneumocystis jirovecii* pneumonia occurs in HIV with CD4 below 200; cotrimoxazole treats and prevents it.
- Sporotrichosis, caused by dimorphic *Sporothrix schenckii*, is a subcutaneous mycosis spreading along lymphatics (rose gardener's disease).

Gram-negative bacteria and enteric infections

11/14 sessions

- *E. coli* O157:H7 (Shiga-like toxin producing) is the main cause of haemolytic uraemic syndrome in children.
- *Helicobacter pylori*, a urease-positive curved gram-negative rod, causes most duodenal ulcers.
- In typhoid, blood culture is best in the first week; Widal test becomes positive from the second week.
- Shigella dysentery: frequent small-volume bloody mucoid stools with tenesmus; very low infective dose.

RNA viruses and general virology

10/14 sessions

- Koplik spots on buccal mucosa are pathognomonic of measles during the prodrome.
- Subacute sclerosing panencephalitis is a late, fatal complication of measles virus infection.
- Measles can cause Hecht giant cell pneumonia, especially in immunocompromised children.
- Coronaviruses are enveloped, non-segmented, positive-sense single-stranded RNA viruses with crown-like spikes.

Other bacterial infections

9/14 sessions

- *Mycobacterium leprae* is acid-fast, cannot be grown on artificial media, and is cultivated in mouse footpad or armadillo.
- *Legionella pneumophila* causes Legionnaires pneumonia via aerosols from water systems; no person-to-person spread.
- Whipple disease is caused by *Tropheryma whippelii*, showing PAS-positive macrophages in the small intestine.
- *Bartonella henselae* causes cat-scratch disease; *Bartonella quintana* causes trench fever.

General bacteriology

8/14 sessions

- Transduction is gene transfer by bacteriophage; conjugation needs cell contact via sex pilus; transformation is uptake of free DNA.
- Transfection means introducing nucleic acid into eukaryotic cells in the laboratory, not natural bacterial gene transfer.
- Sporulation begins in the stationary phase of the bacterial growth curve as nutrients become depleted.
- Bacterial spores, formed by *Bacillus* and *Clostridium*, are highly resistant and are reliably killed by autoclaving.

Protozoal parasites

8/14 sessions

- Chagas disease (*Trypanosoma cruzi*) is transmitted by reduviid (triatomine) bugs.
- Kala-azar (*Leishmania donovani*) is spread by sandflies; LD bodies are seen within macrophages.
- *Trichomonas vaginalis* exists only as a trophozoite and has no cyst stage.
- *Plasmodium falciparum* causes cerebral malaria with coma, severe anaemia and hypoglycaemia in children.

Immunology

8/14 sessions

- IgM is a pentamer, the first antibody produced, and indicates recent infection.
- IgG is the most abundant serum immunoglobulin and the only one that crosses the placenta.
- Deficiency of terminal complement components (C5-C9) predisposes to recurrent *Neisseria* infections.
- The classical complement pathway is activated when antigen-antibody complexes bind C1q.

DNA viruses

7/14 sessions

- HSV, VZV, EBV and CMV belong to the herpesvirus family; EBV causes infectious mononucleosis.
- Cytomegalovirus produces characteristic 'owl's eye' intranuclear inclusions.
- HPV 16 and 18 are high-risk types causing most cervical cancers; HPV 6 and 11 cause genital warts.
- Molluscum contagiosum is caused by a poxvirus; lesions contain molluscum (Henderson-Paterson) bodies.

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Biochemistry

5.0% of questions found | 17 repeated topics | 4 marked must know

Topic	Sessions of 14	Years seen
Amino acid metabolism and disorders Must know	11 	2017, 18, 19, 20, 21, 22, 24
Water-soluble vitamins Must know Recent	10 	2017, 18, 19, 20, 21, 22, 25
Carbohydrate metabolism Must know Recent	10 	2017, 18, 19, 21, 22, 24, 25
Glycogen metabolism and storage diseases Must know Recent	9 	2018, 19, 20, 21, 22, 24, 25
Lipid metabolism Recent	8 	2017, 18, 19, 20, 21, 22, 25
Minerals and trace elements Recent	7 	2017, 18, 19, 20, 21, 25
Electron transport and biological oxidation	7 	2018, 19, 20, 21, 22
Fat-soluble vitamins	7 	2017, 18, 19, 20, 21
Lipoproteins and disorders Recent	7 	2018, 19, 21, 22, 25
Enzymes and coenzymes	5 	2018, 19, 20
DNA replication and repair Recent	5 	2017, 19, 21, 24, 25
Protein structure	5 	2018, 19, 20, 21, 24
Purine metabolism and gout Recent	5 	2019, 21, 22, 24, 25

Topic	Sessions of 14	Years seen
Urea cycle and ammonia Recent	5 	2018, 19, 20, 25
Heme and bilirubin metabolism Recent	4 	2021, 22, 24, 25
Lysosomal storage disorders Recent	4 	2018, 20, 24, 25

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

High-yield one-liners

Amino acid metabolism and disorders

11/14 sessions

- Tyrosine is the precursor of melanin, catecholamines and thyroid hormones.
- Tryptophan is the precursor of serotonin, melatonin and niacin.
- Arginine is the substrate of nitric oxide synthase, forming nitric oxide and citrulline.
- Maple syrup urine disease is a branched-chain alpha-ketoacid dehydrogenase defect; urine smells of burnt sugar.

Water-soluble vitamins

10/14 sessions

- Thiamine status is assessed by red cell transketolase activity.
- B12 deficiency raises both methylmalonic acid and homocysteine; folate deficiency raises only homocysteine.
- B12 deficiency causes subacute combined degeneration with loss of vibration and position sense.
- Niacin deficiency causes pellagra: dermatitis, diarrhoea and dementia.

Carbohydrate metabolism

10/14 sessions

- GLUT4 is the insulin-dependent transporter in skeletal muscle and adipose tissue; GLUT2 is in liver and beta cells.
- Insulin inhibits gluconeogenesis; glucagon and cortisol stimulate it.
- In diabetic cataract, aldose reductase converts glucose to sorbitol, which accumulates in the lens.
- Low glycaemic index foods are absorbed slowly and cause a smaller rise in blood glucose.

Glycogen metabolism and storage diseases

9/14 sessions

- Von Gierke disease (type I): glucose-6-phosphatase deficiency with fasting hypoglycaemia, hepatomegaly, lactic acidosis and hyperuricaemia.
- McArdle disease (type V): muscle phosphorylase deficiency; exercise cramps with no rise in blood lactate.
- Muscle lacks glucose-6-phosphatase, so muscle glycogen cannot release free glucose into blood.
- Pompe disease (type II): lysosomal acid alpha-glucosidase deficiency, causing cardiomegaly in infancy.

Lipid metabolism

8/14 sessions

- Prostaglandins are derived from arachidonic acid through the cyclooxygenase pathway.
- De novo fatty acid synthesis occurs in the cytosol and needs NADPH; acetyl-CoA carboxylase is rate-limiting.
- Long-chain fatty acids enter mitochondria via the carnitine shuttle; malonyl-CoA inhibits CPT-I.
- Defects of fatty acid oxidation cause hypoketotic hypoglycaemia on fasting.

Minerals and trace elements

7/14 sessions

- Menkes (kinky hair) disease is an X-linked defect of the ATP7A copper transporter; Wilson disease involves ATP7B.
- Keshan disease, a cardiomyopathy, is due to selenium deficiency.
- Selenium is a component of glutathione peroxidase.
- Vitamin C increases iron absorption by reducing ferric iron to the ferrous form.

Electron transport and biological oxidation

7/14 sessions

- Cyanide, carbon monoxide and azide inhibit complex IV (cytochrome c oxidase).
- Rotenone inhibits complex I; antimycin A inhibits complex III.
- Oligomycin inhibits ATP synthase; uncouplers such as 2,4-dinitrophenol and thermogenin dissipate the proton gradient.
- Cytochrome c oxidase transfers electrons to molecular oxygen, forming water.

Fat-soluble vitamins

7/14 sessions

- Calcitriol (1,25-dihydroxycholecalciferol) is active vitamin D; the final 1-alpha hydroxylation occurs in the kidney.
- Vitamin K is needed for gamma-carboxylation of glutamate residues in factors II, VII, IX and X.
- Warfarin and dicoumarol inhibit vitamin K epoxide reductase.
- Vitamin E is the main lipid-phase, chain-breaking antioxidant in cell membranes.



Physiology

3.4% of questions found | 9 repeated topics | 0 marked must know

Topic	Sessions of 14	Years seen
Membrane and action potentials Recent	7 	2017, 18, 20, 21, 25
Renal tubular function and micturition	6 	2017, 18, 20, 22, 24
Respiratory physiology Recent	6 	2017, 18, 19, 21, 24, 25
Female reproductive physiology Recent	5 	2020, 21, 22, 25
Male reproductive physiology	5 	2018, 19, 20, 21, 22
Gastrointestinal physiology	4 	2017, 18, 22
Reflexes and muscle tone	4 	2018, 19, 24
Cardiovascular physiology Recent	4 	2017, 19, 24, 25
Exercise and high altitude Recent	4 	2017, 19, 22, 25

High-yield one-liners

Membrane and action potentials

7/14 sessions

- The resting membrane potential of nerve is closest to the K^+ equilibrium potential.
- Depolarisation is due to opening of voltage-gated Na^+ channels; repolarisation is due to K^+ efflux.
- All-or-none law: any suprathreshold stimulus produces an action potential of the same amplitude.
- Na^+-K^+ ATPase moves 3 Na^+ out and 2 K^+ in; inhibiting it causes depolarisation.

Renal tubular function and micturition

6/14 sessions

- Filtered glucose and amino acids are normally reabsorbed almost completely in the proximal convoluted tubule.
- The PCT reabsorbs about two-thirds of filtered sodium and water, even when ADH levels are high.
- Filtered proteins are reabsorbed in the PCT by endocytosis.
- ADH acts on V_2 receptors in the collecting duct, inserting aquaporin-2 channels to increase water reabsorption.

Respiratory physiology

6/14 sessions

- Type II pneumocytes secrete surfactant, mainly dipalmitoylphosphatidylcholine, which lowers alveolar surface tension.
- Carotid body glomus cells sense low PaO_2 through oxygen-sensitive K^+ channels.
- Central chemoreceptors respond mainly to H^+ in CSF produced from a rise in arterial PCO_2 .
- Kussmaul breathing is deep, rapid breathing seen in metabolic acidosis such as diabetic ketoacidosis.

Female reproductive physiology

5/14 sessions

- The mid-cycle LH surge is triggered by positive feedback from rising estradiol levels.
- Subnuclear vacuolation of endometrial glands is the earliest histological sign of ovulation (early secretory phase).
- Prolactin drives milk synthesis; oxytocin causes milk ejection (let-down).
- Normal pregnancy shows compensated respiratory alkalosis due to progesterone-driven hyperventilation.

Male reproductive physiology

5/14 sessions

- Leydig cells secrete testosterone from cholesterol under the stimulation of LH.
- Tight junctions between Sertoli cells form the blood-testis barrier.
- Sertoli cells respond to FSH and secrete inhibin and androgen-binding protein.
- Sperm acquire progressive motility while passing through the epididymis.

Gastrointestinal physiology

4/14 sessions

- Enteropeptidase (enterokinase) from duodenal mucosa converts trypsinogen to trypsin, which activates the other pancreatic zymogens.
- Enterochromaffin-like cells release histamine, which stimulates parietal cells through H_2 receptors.
- Ghrelin from the stomach stimulates appetite; leptin from adipose tissue suppresses it.
- The area postrema (chemoreceptor trigger zone) in the floor of the fourth ventricle triggers vomiting.

Reflexes and muscle tone

4/14 sessions

- The stretch reflex is the only monosynaptic reflex; its receptor is the muscle spindle.
- The Golgi tendon organ senses muscle tension and mediates the inverse stretch reflex (autogenic inhibition).
- Muscle tone is the resistance of a muscle to passive stretch, maintained by the stretch reflex.
- Gamma motor neurons supply intrafusal fibres and set the sensitivity of the muscle spindle.

Exercise and high altitude

4/14 sessions

- At high altitude oxygen remains about 21% of air, but barometric pressure and hence PO_2 fall.
- Hypoxia drives hyperventilation through peripheral chemoreceptors, causing respiratory alkalosis on arrival at altitude.
- Acclimatisation includes raised erythropoietin and red cell mass and increased 2,3-BPG.
- In histotoxic hypoxia, as in cyanide poisoning, oxygen delivery is normal but cells cannot use it.

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Anatomy

5.9% of questions found | 12 repeated topics | 0 marked must know

Topic	Sessions of 14	Years seen
Brachial plexus and upper limb nerves Recent	7 	2018, 19, 20, 21, 24, 25
Upper limb muscles, bones and joints	7 	2017, 18, 19, 21, 22, 24
Cranial nerves and ganglia Recent	6 	2018, 19, 22, 24, 25
Pharyngeal arches and head-neck embryology	6 	2017, 18, 20, 21, 22, 24
Facial nerve and salivary glands Recent	5 	2018, 19, 20, 25
Brain structures and tracts Recent	5 	2017, 18, 22, 25
Lower limb muscles, bones and joints	5 	2017, 18, 19, 22
Larynx and pharynx	4 	2017, 19, 21
Thorax, lungs and mediastinum	4 	2017, 18, 24
Abdominal arteries Recent	4 	2018, 19, 25
Neck anatomy and triangles Recent	4 	2017, 19, 24, 25
Oesophagus, stomach and abdominal viscera Recent	4 	2017, 20, 22, 25

High-yield one-liners

Brachial plexus and upper limb nerves

7/14 sessions

- Long thoracic nerve injury paralyses serratus anterior, causing winging of the scapula.
- Ulnar nerve injury: hypothenar wasting, clawing of ring and little fingers, sensory loss over medial one and a half fingers.
- Median nerve injury at or above the elbow gives the pointing index finger and loss of thumb opposition.
- Radial nerve injury in the spiral groove (midshaft humerus fracture) causes wrist drop.

Upper limb muscles, bones and joints

7/14 sessions

- The clavicle is the only bony link between the upper limb and the axial skeleton, via the sternoclavicular joint.
- Trapezius and the rhomboids retract the scapula; serratus anterior and pectoralis minor protract it.
- Pectoralis major adducts and medially rotates the arm; its clavicular head also flexes the arm.
- Pectoralis minor divides the axillary artery into three parts; the third part gives subscapular and both circumflex humeral arteries.

Cranial nerves and ganglia

6/14 sessions

- Lacrimal gland secretomotor fibres come from the facial nerve (greater petrosal) and relay in the pterygopalatine ganglion.
- Parotid secretomotor fibres come from the glossopharyngeal nerve (lesser petrosal) and relay in the otic ganglion.
- In hypoglossal nerve palsy the protruded tongue deviates towards the side of the lesion.
- Ammonia stimulates trigeminal nerve endings, so it is not a valid test of olfaction.

Pharyngeal arches and head-neck embryology

6/14 sessions

- First arch (mandibular nerve): muscles of mastication, mylohyoid, anterior belly of digastric, tensor tympani, tensor veli palatini.
- Second arch (facial nerve): muscles of facial expression, stapedius, stylohyoid and posterior belly of digastric.
- Third arch (glossopharyngeal nerve) forms only one muscle: stylopharyngeus.
- The left sixth arch artery forms the ductus arteriosus; the left fourth arch artery forms part of the aortic arch.

Facial nerve and salivary glands

5/14 sessions

- The parotid (Stensen's) duct pierces buccinator and opens opposite the upper second molar tooth.
- Structures within the parotid, superficial to deep: facial nerve, retromandibular vein, external carotid artery.
- The internal carotid artery does not pass through the parotid gland.
- The marginal mandibular branch of the facial nerve supplies the muscles of the lower lip and chin.

Brain structures and tracts

5/14 sessions

- The arcuate fasciculus connects Wernicke's and Broca's areas; its lesion causes conduction aphasia with poor repetition.
- Purkinje cells are the only output neurons of the cerebellar cortex and are inhibitory (GABAergic).
- Deep cerebellar nuclei from lateral to medial: dentate, emboliform, globose, fastigial.

Lower limb muscles, bones and joints

5/14 sessions

- Gluteus medius and minimus are the main hip abductors, supplied by the superior gluteal nerve.
- Their paralysis gives a positive Trendelenburg sign: pelvis drops on the unsupported side when standing on the affected leg.
- Peroneus longus and brevis evert the foot; tibialis anterior and tibialis posterior invert it.

Larynx and pharynx

4/14 sessions

- Posterior cricoarytenoid is the only abductor of the vocal cords.
- Cricothyroid is the only intrinsic laryngeal muscle supplied by the external laryngeal nerve; the rest by the recurrent laryngeal.
- Unpaired laryngeal cartilages are thyroid, cricoid and epiglottis; the cricoid is the only complete cartilaginous ring.
- Killian's dehiscence lies between thyropharyngeus and cricopharyngeus and is the site of Zenker's diverticulum.

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PSM

10.0% of questions found | 26 repeated topics | 10 marked must know

Topic	Sessions of 14	Years seen
Biostatistics Must know Recent	13 	2017, 18, 19, 20, 21, 22, 24, 25
Nutrition and malnutrition Must know Recent	12 	2018, 19, 20, 21, 22, 24, 25
Demography and health indicators Must know Recent	11 	2018, 19, 20, 21, 22, 24, 25
Immunisation and vaccines Must know Recent	10 	2017, 18, 19, 20, 21, 22, 25
National health programmes Must know Recent	10 	2017, 18, 20, 21, 22, 24, 25
Contraception and family planning Must know Recent	10 	2017, 18, 20, 21, 22, 24, 25
Biomedical waste management Must know Recent	10 	2017, 18, 19, 20, 21, 25
Epidemiological study designs Must know Recent	10 	2017, 18, 20, 21, 22, 25
Vector-borne diseases and malaria Must know	9 	2017, 18, 19, 20, 21, 24
Maternal and child health Must know	9 	2017, 18, 19, 20, 21, 22, 24
Water, sanitation and environment Recent	8 	2017, 18, 21, 22, 24, 25
Occupational health and ESI Recent	8 	2018, 19, 20, 21, 22, 24, 25

Topic	Sessions of 14	Years seen
Health care delivery system Recent	8 	2018, 20, 21, 22, 25
Levels of prevention Recent	8 	2018, 19, 20, 22, 24, 25
Disaster management Recent	7 	2017, 18, 19, 20, 25
Epidemiological concepts and measures Recent	6 	2017, 18, 19, 20, 24, 25

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

High-yield one-liners

Biostatistics

13/14 sessions

- Measures of dispersion are range, mean deviation, standard deviation and variance; mean, median and mode measure central tendency.
- A line diagram best shows the trend of an event over time; a pie chart shows proportions of a whole.
- Stratified random sampling suits a population with distinct subgroups, sampling randomly within each subgroup (stratum).
- In a normal distribution, mean plus or minus 1, 2 and 3 SD covers about 68%, 95% and 99.7% of values.

Nutrition and malnutrition

12/14 sessions

- Breastfeed exclusively for the first 6 months, then add complementary foods and continue breastfeeding up to 2 years or beyond.
- Waist-hip ratio above 1.0 in men and above 0.85 in women indicates abdominal fat accumulation.
- WHO adult BMI: 25 to 29.9 is overweight and 30 or more is obese.
- Oedema is present in kwashiorkor but absent in marasmus, which shows severe wasting.

Demography and health indicators

11/14 sessions

- Total fertility rate is the average number of children a woman would bear over her reproductive life at current rates.
- Replacement-level fertility is a TFR of about 2.1, equivalent to a net reproduction rate of 1.
- Demographic cycle: stage 1 high stationary, 2 early expanding, 3 late expanding, 4 low stationary, 5 declining.
- Infant mortality rate is expressed per 1000 live births; maternal mortality ratio per 100,000 live births.

Immunisation and vaccines

10/14 sessions

- At the PHC, vaccines are stored in the ice-lined refrigerator (ILR) at +2 to +8 degrees Celsius.
- A yellow fever vaccination certificate is valid for life, starting 10 days after vaccination.
- Measles vaccine given within 3 days of exposure can prevent the disease in a susceptible contact.
- Diarrhoea and minor illness are not contraindications to OPV; live vaccines are avoided in immunodeficiency and pregnancy.

National health programmes

10/14 sessions

- PM-JAY under Ayushman Bharat gives a health cover of Rs 5 lakh per family per year for hospitalisation.
- ASHA is a village-level community health activist, generally one per 1000 rural population.
- Ujjawala scheme targets prevention of trafficking and rescue and rehabilitation of victims of commercial sexual exploitation.
- The Anganwadi worker is the grass-root ICDS worker providing supplementary nutrition and preschool education.

Contraception and family planning

10/14 sessions

- Pearl index = $\frac{\text{accidental pregnancies} \times 1200}{\text{total months of exposure}}$, giving failures per 100 woman-years.
- After vasectomy, another contraceptive is used for about 3 months until semen shows no sperm.
- Copper T 380A is effective for 10 years and is an ideal spacing method for parous women.
- Combined pills are avoided in breastfeeding women; progestin-only pills or IUDs are preferred during lactation.

Biomedical waste management

10/14 sessions

- Red bag: contaminated recyclable plastics such as tubing, catheters, IV sets and gloves; autoclaved, then recycled.
- White translucent puncture-proof container: sharps including needles, syringes with fixed needles and blades.
- Blue cardboard box or container: broken or contaminated glassware and metallic body implants.

Epidemiological study designs

10/14 sessions

- Cohort study proceeds from cause to effect and directly measures incidence, relative risk and attributable risk.
- Case-control study proceeds from effect to cause, suits rare diseases and gives the odds ratio.
- Cross-sectional study measures prevalence at a single point in time.
- A confounder is associated with both exposure and disease and is unequally distributed between study groups.



Forensic Medicine

3.4% of questions found | 10 repeated topics | 4 marked must know

Topic	Sessions of 14	Years seen
Medical law and ethics Must know Recent	10 	2018, 19, 20, 21, 22, 25
Injuries and wounds Must know Recent	9 	2018, 19, 20, 21, 22, 24, 25
Inquest, courts and autopsy Must know Recent	9 	2017, 18, 19, 20, 22, 24, 25
Sexual offences and obstetric medicolegal Must know Recent	9 	2017, 20, 21, 22, 24, 25
Specific poisons	8 	2017, 18, 19, 20, 21, 22
Identification Recent	7 	2017, 18, 20, 22, 24, 25
Asphyxial deaths Recent	6 	2018, 20, 21, 22, 24, 25
General toxicology Recent	6 	2017, 18, 20, 22, 24, 25
Death and postmortem changes	6 	2017, 18, 20, 21, 22, 24
Forensic serology and laboratory	6 	2017, 18, 20, 21, 22

High-yield one-liners

Medical law and ethics

10/14 sessions

- Births and deaths must be registered within 21 days under the Registration of Births and Deaths Act, 1969.
- McNaughten's rule: a person who, from unsoundness of mind, cannot know the nature of the act is not criminally responsible.
- Confidentiality is essential in counselling; privileged communication allows disclosure only to protect others or the public interest.
- Children in conflict with law are dealt with by the Juvenile Justice Board, not ordinary criminal courts.

Injuries and wounds

9/14 sessions

- Lacerations from blunt force have irregular bruised margins, tissue bridges in the depth and crushed hair bulbs.
- Incised wounds have clean-cut everted edges and are longer than they are deep.
- A gutter fracture of the skull is caused by a bullet grazing the bone tangentially.
- Artificial bruises (e.g. marking nut juice) show vesicles, irregular margins and itching, without the colour changes of true bruises.

Inquest, courts and autopsy

9/14 sessions

- Death in police or judicial custody requires a magistrate's inquest; police inquest is the commonest type in India.
- Cross-examination by the opposing side tests the witness and tries to weaken the evidence; leading questions are allowed.
- A dying declaration is preferably recorded by a magistrate; the doctor certifies the declarant is mentally fit.
- Oral evidence must be direct; hearsay evidence is generally not admissible in court.

Sexual offences and obstetric medicolegal

9/14 sessions

- Masochism is sexual pleasure from receiving pain; sadism is pleasure from inflicting pain.
- Hydrostatic test: lungs floating in water suggest the newborn breathed; putrefied lungs may float falsely.
- Voyeurism (scopophilia) is sexual gratification from secretly watching others undress or engage in sexual acts.

Specific poisons

8/14 sessions

- Organophosphates inhibit acetylcholinesterase: pinpoint pupils, salivation, lacrimation, urination, bronchorrhoea and fasciculations.
- In organophosphate poisoning atropine reverses muscarinic effects; pralidoxime reactivates cholinesterase if given early.
- Cyanide inhibits cytochrome oxidase; bitter almond smell and bright pink lividity are typical.
- Datura seeds cause anticholinergic poisoning: dilated pupils, dry hot flushed skin, delirium and tachycardia; physostigmine is the antidote.

Identification

7/14 sessions

- Superimposition compares a skull with a photograph of the presumed person to establish identity.
- The pelvis is the best single bone for sex determination in adults, followed by the skull.
- Gustafson's method estimates age at death from adult teeth.

Asphyxial deaths

6/14 sessions

- Hanging leaves an oblique, non-continuous ligature mark above the thyroid cartilage; strangulation mark is horizontal and continuous.
- Judicial hanging kills mainly by fracture-dislocation of upper cervical vertebrae with spinal cord injury.
- Burking is a combination of traumatic asphyxia (chest compression) and smothering.
- Gettler's test compares chloride levels in left and right heart blood to diagnose drowning.

General toxicology

6/14 sessions

- Gastric lavage is contraindicated in corrosive poisoning (except carbolic acid), hydrocarbon ingestion and convulsions.
- Carbon monoxide poisoning causes cherry-red postmortem lividity.
- Hydrogen sulphide poisoning gives a rotten egg smell and greenish discoloration.
- Blood for alcohol estimation is preserved with sodium fluoride, usually with potassium oxalate as anticoagulant.

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ENT

5.0% of questions found | 20 repeated topics | 1 marked must know

Topic	Sessions of 14	Years seen
Nasopharyngeal tumours and angiofibroma Must know	9 	2017, 18, 19, 20, 21, 22, 24
Larynx anatomy and disorders	8 	2017, 18, 19, 20, 21, 22, 24
Hearing loss Recent	8 	2018, 19, 21, 22, 24, 25
Otitis media and complications Recent	7 	2018, 20, 21, 22, 24, 25
Nasal diseases and septum	6 	2017, 20, 21, 22, 24
Audiometry and hearing tests Recent	5 	2020, 21, 24, 25
Ear anatomy and examination	5 	2018, 21, 24
Head and neck cancers Recent	5 	2020, 21, 22, 25
Inner ear disorders and vertigo	5 	2017, 18, 19, 22
Pharyngeal infections and anatomy	5 	2017, 19, 20, 21
Nasal polyps and rhinitis Recent	5 	2018, 19, 20, 22, 25
Paediatric and congenital laryngeal disorders Recent	4 	2020, 21, 22, 25
Adenoids and tonsils	4 	2020, 21, 22, 24
Facial nerve disorders	4 	2017, 18, 22

Topic	Sessions of 14	Years seen
Fungal sinusitis Recent	4 	2021, 22, 25
Otitis externa and external ear Recent	4 	2018, 19, 21, 25

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

High-yield one-liners

Nasopharyngeal tumours and angiofibroma

9/14 sessions

- Juvenile nasopharyngeal angiofibroma occurs almost exclusively in adolescent males, presenting with recurrent profuse epistaxis and nasal obstruction.
- Biopsy is contraindicated in suspected angiofibroma because of severe bleeding; contrast-enhanced CT or MRI is the investigation of choice.
- Nasopharyngeal carcinoma most commonly presents as a neck mass (cervical lymphadenopathy); the fossa of Rosenmüller is its commonest site.
- Radiotherapy, often with concurrent chemotherapy, is the treatment of choice for nasopharyngeal carcinoma, which is associated with Epstein-Barr virus.

Larynx anatomy and disorders

8/14 sessions

- Posterior cricoarytenoid is the only abductor of the vocal cords, called the safety muscle of the larynx.
- Internal laryngeal nerve supplies sensation above the vocal cords; recurrent laryngeal nerve supplies sensation below them.
- Cricothyroid is the only intrinsic laryngeal muscle supplied by the external laryngeal nerve; the rest are supplied by the recurrent laryngeal nerve.
- The narrowest part of the airway is the subglottis in infants and the glottis in adults.

Hearing loss

8/14 sessions

- Noise-induced hearing loss shows a characteristic dip at 4000 Hz on pure tone audiometry.
- Presbycusis is bilateral symmetrical high-frequency sensorineural loss, beginning at the basal turn of the cochlea.
- Otosclerosis: progressive bilateral conductive deafness in young women, worse in pregnancy, normal tympanic membrane, Carhart's notch; treated by stapedotomy.
- Cochlear implant is indicated for bilateral severe-to-profound sensorineural loss not helped by hearing aids, with an intact auditory nerve.

Otitis media and complications

7/14 sessions

- Otitis media with effusion (glue ear) gives a flat type B tympanogram; persistent cases need myringotomy with grommet insertion.
- Lateral sinus thrombophlebitis causes picket-fence fever; Tobey-Ayer and Crowe-Beck tests help in its diagnosis.
- Attico-antral (unsafe) chronic otitis media with cholesteatoma is treated surgically by mastoid exploration.
- Meningitis is the commonest intracranial complication of otitis media.

Nasal diseases and septum

6/14 sessions

- Neonates are obligate nasal breathers, so bilateral choanal atresia causes respiratory distress at birth, relieved by an oral airway.
- Atrophic rhinitis (ozæna) is associated with Klebsiella ozaenae; Young's operation closes the nostrils to let the mucosa recover.
- Syphilis perforates the bony septum, whereas tuberculosis involves the cartilaginous septum.
- Little's area (Kiesselbach's plexus) on the anterior-inferior septum is the commonest site of epistaxis.

Audiometry and hearing tests

5/14 sessions

- Otoacoustic emissions are used for newborn hearing screening; BERA is an objective, non-invasive test that confirms hearing loss.
- Negative Rinne (bone conduction better than air) means conductive loss; severe unilateral sensorineural loss gives a false negative Rinne.
- Weber test lateralises to the affected ear in conductive loss and to the better ear in sensorineural loss.
- Tympanogram types: B flat (middle ear fluid), C negative pressure (tube dysfunction), As otosclerosis, Ad ossicular discontinuity.

Ear anatomy and examination

5/14 sessions

- The Eustachian tube and middle ear cavity develop from the first pharyngeal pouch (tubotympanic recess).
- Earache after tonsillectomy is referred pain through the glossopharyngeal nerve (tympanic branch, Jacobson's nerve).
- Semicircular canals sense angular acceleration; the utricle and saccule sense linear acceleration and gravity.
- Ear syringing uses water at body temperature, because cold or hot water causes vertigo by caloric stimulation.

Inner ear disorders and vertigo

5/14 sessions

- Meniere's disease is endolymphatic hydrops: episodic vertigo, fluctuating low-frequency sensorineural loss, tinnitus and aural fullness.
- BPPV is the commonest cause of peripheral vertigo; diagnosed by the Dix-Hallpike test and treated by the Epley manoeuvre.
- Vestibular neuronitis causes sudden severe vertigo without hearing loss, often following a viral infection.
- Hennebert sign (fistula sign with intact tympanic membrane) is seen in Meniere's disease and congenital syphilis.



Ophthalmology

4.8% of questions found | 14 repeated topics | 2 marked must know

Topic	Sessions of 14	Years seen
Visual pathway and neuro-ophthalmology Must know Recent	10 	2017, 18, 19, 20, 21, 22, 25
Glaucoma Must know Recent	9 	2017, 18, 19, 20, 21, 24, 25
Refractive errors and optics Recent	8 	2017, 18, 19, 20, 21, 22, 25
Cataract and lens disorders Recent	7 	2017, 18, 20, 22, 24, 25
Squint, amblyopia and ocular motility Recent	6 	2017, 21, 22, 24, 25
Ocular and orbital trauma	6 	2018, 19, 20, 21, 22
Conjunctivitis and trachoma Recent	6 	2017, 18, 19, 21, 22, 25
Uveitis Recent	6 	2017, 18, 19, 20, 25
Eyelid disorders and ptosis Recent	5 	2017, 19, 21, 22, 25
Corneal diseases and degenerations	5 	2018, 19, 20, 24
Corneal ulcer and keratitis Recent	5 	2019, 20, 21, 22, 25
Lacrimal system and dry eye	5 	2020, 21, 22
Blindness and visual impairment	4 	2019, 21, 24

Topic	Sessions of 14	Years seen
Retinal detachment and dystrophies Recent	4	2018, 19, 24, 25

High-yield one-liners

Visual pathway and neuro-ophthalmology

10/14 sessions

- A chiasmal lesion, typically pituitary adenoma, causes bitemporal hemianopia.
- An optic tract lesion causes incongruous homonymous hemianopia with Wernicke's hemianopic pupil.
- Temporal lobe (Meyer's loop) lesion gives superior quadrantanopia (pie in the sky); parietal lesion gives inferior quadrantanopia (pie on the floor).
- Occipital cortex lesion (posterior cerebral artery) causes congruous homonymous hemianopia with macular sparing.

Glaucoma

9/14 sessions

- Goldmann applanation tonometer is the gold standard for measuring intraocular pressure.
- Acute angle closure: sudden painful red eye, haloes, nausea, vomiting, shallow anterior chamber and mid-dilated vertically oval fixed pupil.
- Phacolytic glaucoma is open-angle (lens proteins leak from hypermature cataract); phacomorphic glaucoma is angle-closure from a swollen lens.

Refractive errors and optics

8/14 sessions

- In myopia parallel rays focus in front of the retina; it is corrected with concave (minus) lenses.
- Newborns are normally hypermetropic by about 2 to 3 dioptres, becoming emmetropic by around 5 to 7 years.
- Keratometer measures corneal curvature; pachymeter measures corneal thickness.
- Plane-mirror retinoscopy at 1 metre: glow moves with the mirror in emmetropia, hypermetropia and low myopia; against in myopia over 1 D.

Cataract and lens disorders

7/14 sessions

- Blunt trauma classically produces a rosette (stellate) shaped posterior cataract.
- Ectopia lentis: upward (superotemporal) in Marfan syndrome, downward (inferonasal) in homocystinuria.
- Nuclear sclerosis causes index myopia, so near vision improves in elderly patients (second sight).
- Posterior capsular opacification after cataract surgery is treated with Nd:YAG laser capsulotomy.

Squint, amblyopia and ocular motility

6/14 sessions

- Amblyopia is treated by correcting the refractive error and occluding (patching) the better eye.
- Anisometropia, a large refractive difference between the two eyes, causes anisometropic amblyopia in the more ametropic eye.
- Third nerve palsy causes a down-and-out eye with ptosis, and a dilated pupil when pupillary fibres are involved.
- The yoke (contralateral synergist) of the right lateral rectus is the left medial rectus, as per Hering's law.

Ocular and orbital trauma

6/14 sessions

- Blowout fracture most commonly involves the orbital floor, caused by a blunt object larger than the orbit, like a ball or fist.
- Floor blowout fracture: enophthalmos, diplopia on upgaze from inferior rectus entrapment, and numb cheek from infraorbital nerve injury.
- The medial orbital wall (lamina papyracea) is the thinnest wall of the orbit.
- Vossius ring (iris pigment on the anterior lens capsule) is a sign of blunt ocular trauma.

Conjunctivitis and trachoma

6/14 sessions

- Herbert's pits, healed limbal follicles, are pathognomonic of trachoma caused by Chlamydia trachomatis.
- Azithromycin is the drug of choice for trachoma and is used for mass treatment under the SAFE strategy.
- Vernal keratoconjunctivitis: young boys, itching in summer, ropy discharge, cobblestone papillae and Horner-Trantas dots.
- Phlyctenular conjunctivitis is a delayed hypersensitivity reaction to tubercular or staphylococcal proteins.

Uveitis

6/14 sessions

- Acute anterior uveitis is associated with HLA-B27, as in ankylosing spondylitis and reactive arthritis.
- Acute iritis: circumcorneal congestion, small sluggish pupil, and keratic precipitates deposited on the corneal endothelium.
- Sympathetic ophthalmitis is bilateral granulomatous panuveitis after penetrating injury to one eye, with Dalen-Fuchs nodules.



Orthopaedics

3.0% of questions found | 8 repeated topics | 1 marked must know

Topic	Sessions of 14	Years seen
Upper limb fractures and injuries Must know Recent	9 	2017, 18, 19, 22, 24, 25
Arthritis and joint disease Recent	6 	2017, 18, 19, 20, 25
Bone tumours Recent	6 	2017, 18, 20, 21, 25
Bone and joint infections	6 	2017, 18, 19, 20, 21, 24
Fractures, healing and complications Recent	5 	2018, 19, 20, 24, 25
Metabolic bone disease	4 	2020, 21, 24
Hip fractures and disorders Recent	4 	2019, 20, 25
Paediatric and congenital orthopaedics Recent	4 	2018, 20, 21, 25

High-yield one-liners

Upper limb fractures and injuries

9/14 sessions

- Colles fracture: distal radius with dorsal displacement (dinner-fork deformity), commonest in postmenopausal women after a fall.
- Monteggia: proximal ulna fracture with radial head dislocation; Galeazzi: radius shaft fracture with distal radioulnar joint dislocation.
- Gamekeeper's (skier's) thumb is injury to the ulnar collateral ligament of the thumb MCP joint.
- Upper-third forearm fractures (above pronator teres insertion) are immobilised in supination.

Arthritis and joint disease

6/14 sessions

- Osteoarthritis involves DIP (Heberden's nodes), PIP (Bouchard's nodes), knee and hip, sparing MCP joints and wrist.
- Rheumatoid arthritis involves MCP, PIP and wrist joints and typically spares the DIP joints.
- Gout is confirmed by needle-shaped, negatively birefringent urate crystals in synovial fluid.
- Pseudogout: calcium pyrophosphate crystals, positively birefringent and rhomboid, with chondrocalcinosis on X-ray.

Bone tumours

6/14 sessions

- Giant cell tumour: epiphyseal lytic 'soap-bubble' lesion arising after skeletal maturity, commonly around the knee.
- Osteosarcoma: metaphyseal, around the knee; sunburst appearance and Codman's triangle reflect periosteal reaction.
- Ewing's sarcoma: diaphyseal, onion-peel periosteal reaction, associated with t(11;22).
- Sclerotic (osteoblastic) vertebral metastases in an elderly man suggest carcinoma prostate.

Bone and joint infections

6/14 sessions

- Acute haematogenous osteomyelitis in children most often affects the metaphysis; Staphylococcus aureus is the commonest organism.
- Spine is the commonest site of skeletal tuberculosis (Pott's spine), followed by the hip.
- Sequestrum is dead bone, appearing denser on X-ray; involucrum is the surrounding new periosteal bone.
- Salmonella osteomyelitis is characteristically associated with sickle cell disease.

Fractures, healing and complications

5/14 sessions

- Fat embolism after long-bone fractures: respiratory distress, confusion and petechial rash, typically 24-72 hours later.
- Compartment syndrome: pain out of proportion and pain on passive stretch are the earliest signs.
- Clinical union means no tenderness and no abnormal mobility at the fracture site.
- Scaphoid waist, femoral neck and talar neck fractures are prone to avascular necrosis.

Metabolic bone disease

4/14 sessions

- Vitamin D deficiency gives low or normal calcium, low phosphate, raised alkaline phosphatase and raised PTH.
- Rickets is vitamin D deficiency in children: rachitic rosary, widened wrists, cupping and fraying of metaphyses.
- Osteogenesis imperfecta is a type I collagen defect: blue sclerae, recurrent fractures and hearing loss.
- Skeletal fluorosis causes osteosclerosis with calcification of ligaments and interosseous membranes.

Hip fractures and disorders

4/14 sessions

- Medial circumflex femoral artery is the main supply to the femoral head; intracapsular neck fractures risk avascular necrosis.
- Posterior hip dislocation (dashboard injury): limb shortened, flexed, adducted, internally rotated; sciatic nerve at risk.
- Anterior hip dislocation holds the limb in flexion, abduction and external rotation.
- Displaced intracapsular neck of femur: young patients need urgent reduction and internal fixation; elderly usually need arthroplasty.

Paediatric and congenital orthopaedics

4/14 sessions

- Blount disease (tibia vara) results from abnormal growth of the medial proximal tibial physis.
- Pavlik harness is used for developmental dysplasia of the hip in infants under 6 months.
- CTEV is treated by Ponseti serial casting; deformities are corrected in CAVÉ order: cavus, adductus, varus, equinus.
- Malunited supracondylar humerus fracture commonly causes cubitus varus (gunstock deformity).

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Anaesthesia

2.1% of questions found | 5 repeated topics | 1 marked must know

Topic	Sessions of 14	Years seen
Local and regional anaesthesia Must know	9 	2017, 18, 19, 20, 21, 22, 24
Intravenous anaesthetic agents Recent	8 	2017, 18, 19, 20, 21, 24, 25
Airway management Recent	7 	2017, 18, 19, 21, 22, 24, 25
Cardiopulmonary resuscitation	5 	2017, 19, 21, 22, 24
Inhalational anaesthetic agents	5 	2018, 19, 21, 22

High-yield one-liners

Local and regional anaesthesia

9/14 sessions

- Chloroprocaine is the shortest-acting local anaesthetic; dibucaine is the longest-acting and most potent.
- Lignocaine (or prilocaine) is used for intravenous regional (Bier's) block; bupivacaine is avoided due to cardiotoxicity.
- Spinal anaesthesia in adults is given at L3-L4, below the termination of the spinal cord.
- Epidural needle passes supraspinous, interspinous ligaments and ligamentum flavum; the dura is not pierced.

Intravenous anaesthetic agents

8/14 sessions

- Propofol is the induction agent of choice for day-care surgery: rapid clear-headed recovery and antiemetic.
- Ketamine is a bronchodilator, preferred in asthma and shock; causes emergence delirium and dissociative anaesthesia.
- Thiopentone (a barbiturate) is contraindicated in acute intermittent porphyria.
- Etomidate is the most cardiovascularly stable induction agent but causes adrenocortical suppression.

Airway management

7/14 sessions

- Mallampati grading predicts difficult intubation; Cormack-Lehane grades the view at laryngoscopy.
- Capnography showing sustained end-tidal CO₂ is the most reliable confirmation of tracheal intubation.
- Tongue falling back is the commonest cause of airway obstruction in an unconscious patient.
- Jaw thrust is the airway manoeuvre of choice when cervical spine injury is suspected.

Cardiopulmonary resuscitation

5/14 sessions

- Adult chest compressions: 100-120 per minute, depth 5-6 cm, allowing full chest recoil.
- Compression to ventilation ratio in adults is 30:2 without an advanced airway.
- After a defibrillation shock, resume CPR immediately for 2 minutes before checking the rhythm.

Inhalational anaesthetic agents

5/14 sessions

- Halothane can cause hepatitis on repeated exposure and sensitises the heart to catecholamines.
- Sevoflurane is the inhalational induction agent of choice in children: sweet-smelling and non-irritant.
- Desflurane gives the fastest recovery among volatile agents but irritates the airway, so is unsuitable for induction.
- Nitrous oxide causes diffusion hypoxia at the end of anaesthesia and expands closed air spaces.



Radiology

3.1% of questions found | 2 repeated topics | 1 marked must know

Topic	Sessions of 14	Years seen
Radiotherapy and radiation physics Must know Recent	9 	2019, 20, 21, 22, 24, 25
Nuclear medicine Recent	4 	2019, 21, 24, 25

High-yield one-liners

Radiotherapy and radiation physics

9/14 sessions

- Conventional fractionation is 1.8-2 Gy per day, 5 days a week.
- Rapidly dividing tissues (bone marrow, lymphocytes, GI mucosa, gonads) are most radiosensitive; nerve and muscle least.
- Cells are most radiosensitive in G2-M phase and most radioresistant in late S phase.
- Prophylactic cranial irradiation is used in small cell lung carcinoma.

Nuclear medicine

4/14 sessions

- PET most commonly uses F-18 fluorodeoxyglucose (FDG), reflecting glucose metabolism.
- Iodine-131 (beta emitter) treats differentiated thyroid carcinoma and hyperthyroidism; I-123 is used for diagnostic imaging.
- Technetium-99m is the most widely used radionuclide in nuclear imaging.
- MUGA scan with Tc-99m labelled red cells measures left ventricular ejection fraction.



Dermatology

2.0% of questions found | 4 repeated topics | 0 marked must know

Topic	Sessions of 14	Years seen
Cutaneous manifestations of systemic disease Recent	4 	2017, 19, 20, 25
Fungal and parasitic skin infections	4 	2017, 18, 21, 24
Sexually transmitted skin infections Recent	4 	2018, 20, 24, 25
Psoriasis and papulosquamous disorders Recent	4 	2021, 22, 25

High-yield one-liners

Cutaneous manifestations of systemic disease

4/14 sessions

- SLE: photosensitive malar (butterfly) rash sparing nasolabial folds, with oral ulcers.
- Pyoderma gangrenosum: rapidly enlarging painful ulcer with undermined violaceous edge; linked to IBD and rheumatoid arthritis.
- Xeroderma pigmentosum: defective nucleotide excision repair, extreme photosensitivity, freckling and early skin cancers.
- Dermatomyositis: heliotrope rash around the eyes and Gottron papules over knuckles.

Fungal and parasitic skin infections

4/14 sessions

- Scabies: itching worse at night, burrows in finger webs and flexures; permethrin 5% cream is first-line.
- Pityriasis versicolor (Malassezia): hypo- or hyperpigmented scaly macules; KOH shows spaghetti-and-meatball appearance.
- Dermatophytes infect keratinised tissue: skin, hair and nails, but not mucosa.
- Tinea capitis needs oral antifungal therapy such as griseofulvin or terbinafine.

Sexually transmitted skin infections

4/14 sessions

- Primary syphilis: single painless, indurated, clean-based ulcer; benzathine penicillin is the drug of choice.
- Chancroid (*Haemophilus ducreyi*): painful, soft, ragged, undermined ulcer with painful suppurative buboes.
- Secondary syphilis: non-itchy generalised rash involving palms and soles, mucous patches, condylomata lata.
- Lymphogranuloma venereum (*Chlamydia* L1-L3): transient ulcer then painful inguinal buboes with the groove sign.

Psoriasis and papulosquamous disorders

4/14 sessions

- Psoriasis: well-defined plaques with silvery scales on extensors and scalp, nail pitting, Auspitz sign.
- Psoriasis histology shows Munro microabscesses (neutrophils in stratum corneum).
- Lichen planus: pruritic purple polygonal flat-topped papules, Wickham striae, lacy white oral lesions.

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Psychiatry

2.1% of questions found | 8 repeated topics | 3 marked must know

Topic	Sessions of 14	Years seen
Mood disorders Must know Recent	11 	2017, 18, 19, 20, 21, 22, 24, 25
Substance and alcohol use disorders Must know Recent	10 	2017, 18, 20, 21, 22, 24, 25
Schizophrenia and antipsychotics Must know Recent	9 	2017, 18, 20, 21, 22, 24, 25
Anxiety and stress-related disorders Recent	8 	2019, 20, 21, 22, 24, 25
Psychopathology and mental status Recent	6 	2019, 20, 22, 24, 25
Delirium, dementia and organic disorders Recent	5 	2018, 19, 22, 24, 25
Child psychiatry and intellectual disability	4 	2017, 18, 20
Eating and sexual disorders Recent	4 	2017, 21, 24, 25

High-yield one-liners

Mood disorders

11/14 sessions

- Lithium in the first trimester is linked to Ebstein anomaly of the tricuspid valve.
- Anhedonia, loss of pleasure in previously enjoyed activities, is a core symptom of depression.
- Venlafaxine and duloxetine are SNRIs; fluoxetine and sertraline are SSRIs.
- Kubler-Ross stages of dying: denial, anger, bargaining, depression, acceptance.

Substance and alcohol use disorders

10/14 sessions

- Tremor is the earliest alcohol withdrawal sign; delirium tremens usually appears 2-3 days after the last drink.
- Benzodiazepines (chlordiazepoxide, lorazepam) are the drugs of choice for alcohol withdrawal and delirium tremens.
- Wernicke encephalopathy (confusion, ataxia, ophthalmoplegia) needs thiamine, given before glucose.
- Cocaine causes formication (Magnan's sign), a tactile hallucination of insects crawling under skin.

Schizophrenia and antipsychotics

9/14 sessions

- Negative symptoms: alogia, anhedonia, avolition/apathy, affective flattening and asociality.
- Bleuler's 4 A's: autism, ambivalence, loosening of associations and affect disturbance.
- Clozapine is used for treatment-resistant schizophrenia; it can cause agranulocytosis, so blood counts are monitored.
- Olanzapine and clozapine cause most weight gain; aripiprazole and ziprasidone cause least.

Anxiety and stress-related disorders

8/14 sessions

- PTSD: flashbacks, avoidance and hyperarousal persisting more than one month after a traumatic event.
- Specific phobia is fear of a particular object or situation; systematic desensitisation is the treatment of choice.
- Panic attack: sudden intense fear with palpitations, chest pain and fear of dying, peaking within minutes.
- OCD is treated with SSRIs plus exposure and response prevention; contamination with washing is commonest.

Psychopathology and mental status

6/14 sessions

- Serial sevens (100 minus 7) tests attention and concentration.
- Echolalia is repetition of the examiner's words; echopraxia is imitation of the examiner's actions.
- A delusion is a firm, fixed, false belief not in keeping with the person's cultural background.
- Hallucination is perception without a stimulus; illusion is misinterpretation of a real stimulus.

Delirium, dementia and organic disorders

5/14 sessions

- Delirium is the commonest psychiatric syndrome in medical and surgical inpatients.
- Delirium: acute onset, fluctuating consciousness and inattention, often visual hallucinations, worse at night.
- Reversible dementias include hypothyroidism, vitamin B12 deficiency, normal pressure hydrocephalus and subdural haematoma.
- Alzheimer disease is the commonest dementia; shows amyloid plaques and neurofibrillary tangles.

Child psychiatry and intellectual disability

4/14 sessions

- ICD-10 IQ bands: mild 50-69, moderate 35-49, severe 20-34, profound below 20.
- Autism spectrum disorder: impaired social communication with restricted, repetitive behaviours, beginning in early childhood.
- Conduct disorder: repetitive violation of others' rights or rules, such as lying, stealing, cruelty, truancy.
- Specific learning disorder (dyslexia, dyscalculia) occurs despite normal intelligence.

Eating and sexual disorders

4/14 sessions

- Anorexia nervosa: low body weight, intense fear of weight gain, distorted body image; amenorrhoea is common.
- Bulimia nervosa: binge eating with compensatory vomiting; weight is usually normal.
- Russell's sign (knuckle calluses) and parotid enlargement suggest self-induced vomiting in bulimia.

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Must-know summary

Topics found in 9 or more of the 14 sessions. If you only have time for a few hours, start here.

Medicine

Adrenal, pituitary and endocrine disorders **10** Rheumatic fever and valvular heart disease **10**

Connective tissue diseases and gout **9** Diabetes mellitus and dyslipidaemia **9**

Surgery

Trauma and shock **12** Breast diseases **12** Vascular surgery **12**

Urology: stones, bladder and prostate **10** Scrotum, testis and penis **10** Oesophageal disorders **10**

Thoracic and cardiac surgery **10** Burns, grafts and wound care **9**

Small bowel, appendix and acute abdomen **9**

Obstetrics & Gynaecology

Menstrual disorders and amenorrhoea **12** Labour and delivery **11**

Antenatal care and fetal assessment **11** Contraception **10** Abortion and MTP Act **10**

Ovarian disorders, PCOS and gynaecological tumours **10** Ectopic pregnancy **9**

Paediatrics

Neonatal care and resuscitation **10** Growth and development **9**

Pathology

Anaemias and haemoglobinopathies **11** Hypersensitivity and autoimmunity **9**

Neoplasia and carcinogenesis **9** CNS tumours and neuropathology **9**

Pharmacology

Cardiovascular drugs **13** Antimicrobial drugs **13** Anticancer drugs **12** Drugs acting on blood **11**

Drugs for GI, migraine and allergy **11** Analgesics, NSAIDs and gout drugs **10**

Hormones and endocrine drugs **10** Autonomic nervous system drugs **10**

Drugs for respiratory diseases **10**

Microbiology

Medical mycology 11 Gram-negative bacteria and enteric infections 11

RNA viruses and general virology 10 Other bacterial infections 9

Biochemistry

Amino acid metabolism and disorders 11 Water-soluble vitamins 10 Carbohydrate metabolism 10

Glycogen metabolism and storage diseases 9

PSM

Biostatistics 13 Nutrition and malnutrition 12 Demography and health indicators 11

Immunisation and vaccines 10 National health programmes 10 Contraception and family planning 10

Biomedical waste management 10 Epidemiological study designs 10

Vector-borne diseases and malaria 9 Maternal and child health 9

Forensic Medicine

Medical law and ethics 10 Injuries and wounds 9 Inquest, courts and autopsy 9

Sexual offences and obstetric medicolegal 9

ENT

Nasopharyngeal tumours and angiofibroma 9

Ophthalmology

Visual pathway and neuro-ophthalmology 10 Glaucoma 9

Orthopaedics

Upper limb fractures and injuries 9

Anaesthesia

Local and regional anaesthesia 9

Radiology

Radiotherapy and radiation physics 9

Psychiatry

Mood disorders 11 Substance and alcohol use disorders 10 Schizophrenia and antipsychotics 9

The number is the count of sessions out of 14.

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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 sessions

Found in 6 or more sessions and again in 2025 June or 2025 December.

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Seen often, not in the recent sessions

Absence from the two latest sessions is only weak evidence.

Amino acid metabolism and disorders Biochemistry

Ovarian disorders, PCOS and gynaecological tumours Obstetrics & Gynaecology

Vector-borne diseases and malaria PSM

Nasopharyngeal tumours and angiofibroma ENT

Diabetes mellitus and dyslipidaemia Medicine

Local and regional anaesthesia Anaesthesia

Maternal and child health PSM

General bacteriology Microbiology

Larynx anatomy and disorders ENT

Specific poisons Forensic Medicine

Nutrition and malnutrition Paediatrics

Lung cancer and pleural diseases Medicine

Infertility Obstetrics & Gynaecology

Renal pathology Pathology

Upper limb muscles, bones and joints Anatomy

Fibroids and benign uterine disorders Obstetrics & Gynaecology

Cardiovascular pathology Pathology

Electron transport and biological oxidation Biochemistry

Hypertensive disorders of pregnancy Obstetrics & Gynaecology

Congenital heart disease Paediatrics

Fat-soluble vitamins Biochemistry

Acid-base and electrolyte disorders Medicine

Epidemiology of communicable diseases PSM

Malabsorption and celiac disease Medicine

Sterilisation and infection control Microbiology

Ocular and orbital trauma Ophthalmology

Stomach and duodenum disorders Surgery

Bone and joint infections Orthopaedics

Death and postmortem changes Forensic Medicine

Nasal diseases and septum ENT

Renal tubular function and micturition Physiology

Forensic serology and laboratory Forensic Medicine

Pericardial disease Medicine

Pharyngeal arches and head-neck embryology Anatomy

Newer topics (2024 to 2025 sessions only)

Found in two or more of the 2024 June, 2025 June and 2025 December sessions, but never before.

Preoperative assessment and day care Anaesthesia

Anaemia and haemoglobinopathies Medicine

Laryngeal nerve injuries ENT

Monitoring in anaesthesia Anaesthesia

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.

106 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

A 10-year-old with fever and migratory arthritis after a sore throat has pink ring-shaped rashes with pale centres on the trunk. This skin finding is:

- A Erythema marginatum, a major Jones criterion
- B Erythema nodosum, a major Jones criterion
- C Erythema multiforme, a minor Jones criterion
- D Malar rash, a minor Jones criterion

2 MEDICINE

The most common organism causing infective endocarditis in intravenous drug users is:

- A Staphylococcus epidermidis
- B Staphylococcus aureus
- C Enterococcus faecalis
- D Streptococcus viridans

3 MEDICINE

Which HbA1c value is the threshold for diagnosing diabetes mellitus?

- A 7.5% or more
- B 5.7% or more
- C 6.5% or more
- D 6.0% or more

4 MEDICINE

A patient with diabetic ketoacidosis has received IV normal saline. Serum potassium is 3.0 mmol/L. What is the next step?

- A Start IV insulin infusion immediately
- B Switch to 5% dextrose alone
- C Give IV sodium bicarbonate
- D Give IV potassium before starting insulin

5 MEDICINE

A 62-year-old smoker has proximal leg weakness that improves after repeated effort, dry mouth and reduced reflexes. The antibodies in this condition target:

- A Presynaptic voltage-gated calcium channels
- B Voltage-gated sodium channels
- C Postsynaptic acetylcholine receptors
- D Muscle-specific kinase (MuSK)

6 MEDICINE

A patient with confirmed pheochromocytoma is scheduled for adrenalectomy. Which drug should be started first?

- A Furosemide
- B Phenoxybenzamine
- C Spironolactone
- D Propranolol

7 MEDICINE

A patient with subarachnoid haemorrhage from a ruptured aneurysm is admitted. Which drug is given to reduce ischaemia from cerebral vasospasm?

- A Amlodipine
- B Labetalol
- C Nimodipine
- D Mannitol

8 MEDICINE

A man with coarse facial features, enlarging hands and a raised IGF-1 needs confirmation of acromegaly. The confirmatory test is:

- A Insulin tolerance test
- B Random serum GH level
- C Serum prolactin level
- D GH measurement after an oral glucose load

9 SURGERY

According to the ATLS classification of haemorrhagic shock, a fall in systolic blood pressure first appears in which class?

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

10 SURGERY

A 22-year-old woman has a 2 cm firm, painless, well-defined, highly mobile breast lump. Most likely diagnosis?

- A Duct papilloma
- B Fibroadenoma
- C Phyllodes tumour
- D Fibrocystic disease

11 SURGERY

A 14-year-old boy has sudden severe scrotal pain for 2 hours; the testis lies high and horizontal and the cremasteric reflex is absent. Best next step?

- A Analgesics and review after 24 hours
- B Elective ultrasound the next week
- C Urgent scrotal exploration
- D Antibiotics and scrotal support

12 SURGERY

A 35-year-old man has progressive dysphagia to both solids and liquids, and barium swallow shows a smooth bird-beak narrowing. Gold standard investigation?

- A 24-hour pH monitoring
- B CT chest
- C Barium meal follow-through
- D Oesophageal manometry

13 SURGERY

Before surgery for varicose veins, which test assesses patency of the deep veins?

- A Perthes test
- B Brodie-Trendelenburg test
- C Schwartz tap test
- D Allen's test

14 OBSTETRICS & GYNAECOLOGY

A 26-year-old with 7 weeks of amenorrhoea collapses with lower abdominal pain; pulse 130/min, BP 80/50, urine hCG positive, free fluid on ultrasound. Best next step?

- A Emergency laparotomy
- B Expectant management
- C Repeat serum beta-hCG after 48 hours
- D Intramuscular methotrexate

15 OBSTETRICS & GYNAECOLOGY

A 28-year-old with infertility, progressive dysmenorrhoea and deep dyspareunia has a 'chocolate' cyst on ultrasound. Gold-standard investigation for the underlying disease?

- A Serum CA-125
- B Laparoscopy
- C MRI pelvis
- D Hysterosalpingography

16 OBSTETRICS & GYNAECOLOGY

An ectopic pregnancy in which part of the fallopian tube characteristically ruptures latest, often with severe haemorrhage?

- A Isthmus
- B Ampulla
- C Interstitial portion
- D Fimbrial end

17 OBSTETRICS & GYNAECOLOGY

An obese 24-year-old with oligomenorrhoea, acne and hirsutism has multiple peripheral ovarian follicles. Which laboratory finding is expected?

- A Raised FSH with low estradiol
- B Raised sex hormone binding globulin
- C Low serum testosterone
- D Raised LH:FSH ratio

18 OBSTETRICS & GYNAECOLOGY

A 32-year-old with a past deep vein thrombosis wants reversible long-term contraception. Most suitable method?

- A Copper intrauterine device
- B Combined oral contraceptive pill
- C Combined transdermal patch
- D Combined vaginal ring

19 PAEDIATRICS

A term newborn receives 30 seconds of effective bag-and-mask ventilation, but heart rate remains 50/min. Next step?

- A Continue ventilation alone for another minute
- B Start chest compressions with ventilation
- C Give intramuscular naloxone
- D Give intravenous sodium bicarbonate

20 PAEDIATRICS

A preterm neonate has bounding pulses and a continuous machinery murmur below the left clavicle. Drug used to close the lesion?

- A Adenosine
- B Prostaglandin E1
- C Indomethacin
- D Propranolol

21 PAEDIATRICS

A 4-year-old has generalised oedema, heavy proteinuria, normal BP, no haematuria and normal C3. Most likely renal histology?

- A IgA nephropathy
- B Membranoproliferative glomerulonephritis
- C Membranous nephropathy
- D Minimal change disease

22 PAEDIATRICS

Which single finding classifies a 2-year-old as having severe acute malnutrition?

- A Bilateral pitting oedema of the feet
- B Weight-for-age below -2 SD
- C MUAC of 12.0 cm
- D Height-for-age below -3 SD

23 PAEDIATRICS

A 6-week-old has persistent jaundice, clay-coloured stools and dark urine with conjugated hyperbilirubinaemia; hepatobiliary scan shows no bowel excretion. Treatment?

- A Phototherapy
- B Kasai portoenterostomy
- C Exchange transfusion
- D Oral ursodeoxycholic acid alone

24 PATHOLOGY

A 5-year-old boy has pallor, fever, bone pain, petechiae and hepatosplenomegaly; the blood smear shows many lymphoblasts. Most likely diagnosis?

- A Acute lymphoblastic leukaemia
- B Chronic lymphocytic leukaemia
- C Hairy cell leukaemia
- D Chronic myeloid leukaemia

25 PATHOLOGY

Which set of iron studies best fits iron deficiency anaemia?

- A Raised serum ferritin with raised transferrin saturation
- B Low serum ferritin with raised TIBC
- C Normal serum ferritin with normal TIBC
- D Raised serum ferritin with low TIBC

26 PATHOLOGY

The Arthus reaction is an example of which type of hypersensitivity?

- A Type I
- B Type IV
- C Type III
- D Type II

27 PATHOLOGY

A young man has haemoptysis and rapidly worsening renal failure; renal biopsy shows linear IgG deposits along the glomerular basement membrane. The target antigen is in:

- A Streptococcal cell wall
- B Phospholipase A2 receptor
- C Type I collagen
- D Type IV collagen

28 PATHOLOGY

A 4-year-old has ataxia and vomiting; MRI shows a midline cerebellar mass, and histology shows small round blue cells with Homer Wright rosettes. Diagnosis?

- A Medulloblastoma
- B Schwannoma
- C Meningioma
- D Glioblastoma

29 PATHOLOGY

A boy develops acute haemolysis after taking primaquine; his maternal uncle had a similar episode. The most likely defect is:

- A Paroxysmal nocturnal haemoglobinuria
- B G6PD deficiency
- C Sickle cell anaemia
- D Hereditary spherocytosis

30 PHARMACOLOGY

A patient on dabigatran for atrial fibrillation presents with major bleeding. The specific reversal agent is:

- A Andexanet alfa
- B Vitamin K
- C Idarucizumab
- D Protamine sulfate

31 PHARMACOLOGY

Haemorrhagic cystitis that can be prevented by giving mesna is a toxicity of:

- A Vincristine
- B Cisplatin
- C Bleomycin
- D Cyclophosphamide

32 PHARMACOLOGY

Which diuretic acts by inhibiting the Na-K-2Cl cotransporter in the thick ascending limb of the loop of Henle?

- A Furosemide
- B Hydrochlorothiazide
- C Spironolactone
- D Acetazolamide

33 PHARMACOLOGY

An antibiotic used for MRSA and VRE binds 23S rRNA of the 50S subunit and prevents formation of the 70S initiation complex. It is:

- A Ciprofloxacin
- B Linezolid
- C Daptomycin
- D Vancomycin

34 PHARMACOLOGY

A woman at 8 weeks of pregnancy has Graves disease needing drug treatment. The preferred antithyroid drug is:

- A Carbimazole
- B Potassium iodide
- C Propylthiouracil
- D Radioactive iodine

35 PHARMACOLOGY

In organophosphate poisoning, which drug reactivates the phosphorylated acetylcholinesterase?

- A Atropine
- B Physostigmine
- C Neostigmine
- D Pralidoxime

36 MICROBIOLOGY

A diabetic in ketoacidosis has a black necrotic eschar on the palate; biopsy shows broad aseptate hyphae branching at right angles. The likely agent is:

- A Rhizopus
- B Cryptococcus neoformans
- C Candida albicans
- D Aspergillus fumigatus

37 MICROBIOLOGY

A child develops bloody diarrhoea after eating undercooked beef, followed by anaemia, low platelets and acute kidney injury. The most likely organism is:

- A Enterotoxigenic E. coli
- B E. coli O157:H7
- C Salmonella Typhi
- D Vibrio cholerae

38 MICROBIOLOGY

In the first week of suspected enteric fever, the most useful investigation is:

- A Urine culture
- B Stool culture
- C Blood culture
- D Widal test

39 MICROBIOLOGY

Which immunoglobulin crosses the placenta to protect the newborn?

- A IgE
- B IgA
- C IgM
- D IgG

40 MICROBIOLOGY

A 12-year-old has progressive intellectual decline and myoclonic jerks years after a rash illness in infancy; CSF shows very high antibody titres to the causative virus. The virus is:

- A Measles virus
- B JC virus
- C Mumps virus
- D Rubella virus

41 MICROBIOLOGY

Anogenital warts (condyloma acuminata) are most commonly caused by which HPV types?

- A HPV 16 and 18
- B HPV 6 and 11
- C HPV 1 and 2
- D HPV 31 and 33

42 BIOCHEMISTRY

An infant has fasting hypoglycaemia, lactic acidosis, hyperuricaemia and a large liver. Which enzyme is deficient?

- A Branching enzyme
- B Acid alpha-glucosidase
- C Glucose-6-phosphatase
- D Muscle glycogen phosphorylase

43 BIOCHEMISTRY

A fair-skinned child with intellectual disability has a musty, mousy body odour. Which enzyme is deficient?

- A Tyrosinase
- B Branched-chain alpha-ketoacid dehydrogenase
- C Homogentisate oxidase
- D Phenylalanine hydroxylase

44 BIOCHEMISTRY

A chronic alcoholic presents with confusion, ataxia and ophthalmoplegia. Deficiency of which vitamin is responsible?

- A Thiamine
- B Pyridoxine
- C Riboflavin
- D Niacin

45 BIOCHEMISTRY

Which compound directly inhibits mitochondrial ATP synthase?

- A Antimycin A
- B Oligomycin
- C Cyanide
- D Rotenone

46 BIOCHEMISTRY

Vitamin K is required for which post-translational modification of clotting factors?

- A Glycosylation of asparagine residues
- B Phosphorylation of serine residues
- C Gamma-carboxylation of glutamate residues
- D Hydroxylation of proline residues

47 BIOCHEMISTRY

An infant boy has sparse, kinky hair, seizures and low serum copper. Which gene is defective?

- A ATP7B
- B Ceruloplasmin gene
- C HFE
- D ATP7A

48 PHYSIOLOGY

What happens to the resting membrane potential of a neuron when extracellular K^+ concentration is raised?

- A It reverses to a positive value
- B It does not change
- C It becomes more negative
- D It becomes less negative (depolarises)

49 PHYSIOLOGY

A weightlifter's muscle suddenly gives way when the load becomes excessive, protecting the tendon. Which receptor mediates this response?

- A Golgi tendon organ
- B Pacinian corpuscle
- C Muscle spindle
- D Merkel disc

50 PHYSIOLOGY

The main surface-active lipid in pulmonary surfactant is:

- A Phosphatidylinositol
- B Dipalmitoylphosphatidylcholine
- C Sphingomyelin
- D Cholesterol

51 PHYSIOLOGY

Which segment of the nephron reabsorbs the largest fraction of filtered sodium and water?

- A Distal convoluted tubule
- B Collecting duct
- C Proximal convoluted tubule
- D Thick ascending limb of Henle

52 PHYSIOLOGY

A trekker who has just arrived at a high-altitude camp breathes rapidly. Which acid-base change is expected first?

- A Respiratory acidosis
- B Metabolic alkalosis
- C Metabolic acidosis
- D Respiratory alkalosis

53 PHYSIOLOGY

Suckling causes milk to be squeezed out of the alveoli of the breast. Which hormone mediates this?

- A Oxytocin
- B Progesterone
- C Estrogen
- D Prolactin

54 PHYSIOLOGY

Which hormone secreted by Sertoli cells selectively suppresses FSH release?

- A Activin
- B Inhibin
- C GnRH
- D Testosterone

55 ANATOMY

A man fractures the surgical neck of his humerus and then cannot abduct his arm, with numbness over the lower deltoid. Which nerve is injured?

- A Axillary nerve
- B Radial nerve
- C Musculocutaneous nerve
- D Suprascapular nerve

56 ANATOMY

After a midshaft fracture of the humerus, a patient cannot extend his wrist. Which nerve is most likely damaged?

- A Ulnar nerve
- B Radial nerve
- C Median nerve
- D Axillary nerve

57 ANATOMY

Stylopharyngeus is derived from which pharyngeal arch?

- A Second arch
- B First arch
- C Third arch
- D Fourth arch

58 ANATOMY

Which intrinsic muscle of the larynx is supplied by the external laryngeal nerve?

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

59 ANATOMY

Preganglionic secretomotor fibres to the parotid gland relay in which ganglion?

- A Otic ganglion
- B Submandibular ganglion
- C Pterygopalatine ganglion
- D Ciliary ganglion

60 ANATOMY

After a stroke, a patient speaks fluently and follows commands but cannot repeat a short sentence. Which tract is damaged?

- A Corpus callosum
- B Arcuate fasciculus
- C Fornix
- D Uncinate fasciculus

61 ANATOMY

After a gluteal intramuscular injection, a patient's pelvis sags on the left whenever he stands on his right leg alone. Which nerve is injured?

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

62 PSM

A district officer wants to display the number of dengue cases reported each month over the last five years. Which diagram is most appropriate?

- A Line diagram
- B Pie chart
- C Pictogram
- D Spot map

63 PSM

Which of the following is a measure of central tendency?

- A Standard deviation
- B Median
- C Range
- D Variance

64 PSM

Investigators compare past smoking habits of 200 bladder cancer patients with 200 matched controls. Which measure of association is calculated?

- A Relative risk
- B Incidence rate
- C Odds ratio
- D Attributable risk

65 PSM

Under the Biomedical Waste Management Rules, a used hypodermic needle should be discarded into which container?

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

66 PSM

Which vaccine is contraindicated during pregnancy?

- A MMR vaccine
- B Tetanus-diphtheria (Td) vaccine
- C Hepatitis B vaccine
- D Inactivated influenza vaccine

67 PSM

A net reproduction rate (NRR) of 1 in a population indicates:

- A Every woman has exactly one child
- B Each generation of mothers is exactly replacing itself
- C The population will double in one generation
- D The population is declining by half

68 PSM

The Pearl index expresses contraceptive failure as the number of pregnancies per:

- A 100 menstrual cycles
- B 100 couples protected
- C 100 woman-years of exposure
- D 1000 woman-years of exposure

69 PSM

A 2-year-old child has pitting pedal oedema, flaky-paint skin lesions, sparse hair and a miserable look. The most likely diagnosis is:

- A Scurvy
- B Rickets
- C Marasmus
- D Kwashiorkor

70 FORENSIC MEDICINE

A man is found dead with a smell of bitter almonds and bright pink lividity. The poison acts mainly by:

- A Inhibiting acetylcholinesterase
- B Inhibiting Na-K ATPase
- C Inhibiting cytochrome oxidase
- D Forming methaemoglobin

71 FORENSIC MEDICINE

A child who ate some seeds has dilated pupils, dry flushed skin, delirium and tachycardia. The antidote of choice is:

- A Pralidoxime
- B Atropine
- C Naloxone
- D Physostigmine

72 FORENSIC MEDICINE

At autopsy the neck shows an oblique, non-continuous ligature mark above the thyroid cartilage. This most suggests:

- A Hanging
- B Smothering
- C Ligature strangulation
- D Throttling

73 FORENSIC MEDICINE

Gustafson's method in forensic odontology is used to estimate:

- A Stature from long bones
- B Age from teeth
- C Sex from the pelvis
- D Race from the skull

74 FORENSIC MEDICINE

An undertrial prisoner dies suddenly in jail custody. The inquest must be held by:

- A A coroner
- B A police officer
- C A magistrate
- D A medical examiner

75 FORENSIC MEDICINE

A rape survivor seeks termination at 22 weeks of pregnancy. Under the amended MTP Act 2021, termination requires the opinion of:

- A A state medical board
- B A court order
- C One registered medical practitioner
- D Two registered medical practitioners

76 ENT

A 15-year-old boy has repeated bouts of heavy one-sided nosebleed and nasal blockage, with a smooth reddish mass in the nasopharynx. Which step should be avoided?

- A Biopsy of the mass
- B MRI of the nasopharynx
- C Contrast-enhanced CT scan
- D Carotid angiography

77 ENT

After thyroid surgery, a patient has stridor because both vocal cords cannot move apart. Which muscle is the only abductor of the vocal cords?

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

78 ENT

A 40-year-old textile mill worker complains of ringing and poor hearing in both ears. His audiogram shows sensorineural loss with a notch at 4 kHz. What is the likely diagnosis?

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

79 ENT

A 45-year-old has recurrent attacks of vertigo lasting hours, with fluctuating hearing loss, tinnitus and a sense of fullness in one ear. What is the underlying pathology?

- A Otoconia displaced into the posterior semicircular canal
- B Fixation of the stapes footplate
- C Viral inflammation of the vestibular nerve
- D Endolymphatic hydrops

80 ENT

A patient has impacted wax in the right ear only, with normal inner ears. Where will the Weber test lateralise?

- A To the right ear
- B To the left ear
- C Remain in the midline
- D Not be heard in either ear

81 OPHTHALMOLOGY

After a stroke, a patient has left homonymous hemianopia in both eyes with central vision spared. Where is the lesion?

- A Right optic tract
- B Right occipital cortex
- C Left optic nerve
- D Optic chiasma

82 OPHTHALMOLOGY

A woman is treated for acute primary angle-closure glaucoma in one eye. What is the preferred prophylactic procedure for her other eye?

- A Argon laser trabeculoplasty
- B Excimer laser photorefractive keratectomy
- C Nd:YAG laser peripheral iridotomy
- D Nd:YAG laser posterior capsulotomy

83 OPHTHALMOLOGY

A tall 14-year-old boy with long fingers, joint laxity and a heart murmur has both lenses displaced upward and outward. What is the most likely diagnosis?

- A Homocystinuria
- B Weill-Marchesani syndrome
- C Sulphite oxidase deficiency
- D Marfan syndrome

84 OPHTHALMOLOGY

A child from a village with poor water supply has follicles on the upper tarsal conjunctiva; healed follicles leave small depressions at the limbus. What are these depressions called?

- A Herbert's pits
- B Bitot's spots
- C Horner-Trantas dots
- D Arlt's line

85 OPHTHALMOLOGY

A 25-year-old man with low back pain and morning stiffness has a painful red eye with photophobia and a small pupil. Which HLA type is most associated?

- A HLA-DR4
- B HLA-B27
- C HLA-DR3
- D HLA-B51

86 ORTHOPAEDICS

A 65-year-old woman falls on her outstretched hand and has a dinner-fork deformity of the wrist. Diagnosis?

- A Smith fracture
- B Colles fracture
- C Barton fracture
- D Galeazzi fracture

87 ORTHOPAEDICS

After a car crash in which his knee struck the dashboard, a man's leg is shortened, flexed, adducted and internally rotated at the hip. Diagnosis?

- A Intertrochanteric fracture
- B Central fracture-dislocation of hip
- C Posterior dislocation of hip
- D Anterior dislocation of hip

88 ORTHOPAEDICS

A man has acute pain and swelling of the first metatarsophalangeal joint. Which finding confirms gout?

- A Raised serum uric acid
- B Positively birefringent rhomboid crystals in synovial fluid
- C Chondrocalcinosis on X-ray
- D Negatively birefringent needle-shaped crystals in synovial fluid

89 ORTHOPAEDICS

A 25-year-old has knee pain; X-ray shows an eccentric, expansile, epiphyseal lytic soap-bubble lesion in the distal femur. Most likely diagnosis?

- A Giant cell tumour
- B Osteosarcoma
- C Osteoid osteoma
- D Ewing's sarcoma

90 ANAESTHESIA

Which intravenous induction agent is known to cause adrenocortical suppression?

- A Ketamine
- B Etomidate
- C Thiopentone
- D Propofol

91 ANAESTHESIA

During general anaesthesia with a volatile agent and succinylcholine, a patient develops rising end-tidal CO₂, rigidity and hyperthermia. Specific treatment?

- A Neostigmine
- B Baclofen
- C Dantrolene
- D Diazepam

92 ANAESTHESIA

An unconscious road-accident victim with suspected cervical spine injury has airway obstruction. Best initial manoeuvre?

- A Head tilt-chin lift
- B Neck extension with a pillow under the shoulders
- C Sniffing position
- D Jaw thrust

93 ANAESTHESIA

Which local anaesthetic is the longest-acting and most potent?

- A Dibucaine
- B Chlorprocaine
- C Lignocaine
- D Procaine

94 RADIOLOGY

In which phase of the cell cycle are cells most sensitive to radiation?

- A Late S phase
- B G2-M phase
- C G0 phase
- D G1 phase

95 RADIOLOGY

After total thyroidectomy for papillary carcinoma, which radionuclide is used to ablate the remnant thyroid tissue?

- A Technetium-99m pertechnetate
- B Fluorine-18 FDG
- C Iodine-131
- D Iodine-123

96 RADIOLOGY

A 3-year-old with recurrent urinary tract infections is suspected to have vesicoureteric reflux. Investigation of choice?

- A DMSA scan
- B Non-contrast CT KUB
- C Intravenous urogram
- D Micturating cystourethrogram

97 DERMATOLOGY

A man had a small transient painless genital ulcer, followed weeks later by painful inguinal lymph nodes above and below the inguinal ligament (groove sign). Causative organism?

- A Haemophilus ducreyi
- B Treponema pallidum
- C Klebsiella granulomatis
- D Chlamydia trachomatis serovars L1-L3

98 DERMATOLOGY

A biopsy from silvery scaly plaques on the elbows shows collections of neutrophils in the stratum corneum. These are called?

- A Munro microabscesses
- B Pautrier microabscesses
- C Civatte bodies
- D Kamino bodies

99 DERMATOLOGY

A patient on MDT for lepromatous leprosy develops fever and crops of tender red nodules on the face and limbs. Diagnosis?

- A Type 1 reversal reaction
- B Erythema nodosum leprosum (type 2 reaction)
- C Relapse of tuberculoid leprosy
- D Dapsone hypersensitivity syndrome

100 DERMATOLOGY

Several members of one family have itching that is worse at night, with burrows in finger webs. Treatment of choice?

- A Topical clotrimazole
- B Topical betamethasone
- C Permethrin 5% cream for all household contacts
- D Oral griseofulvin

101 DERMATOLOGY

An elderly farmer has a slowly growing pearly nodule with a rolled edge and telangiectasia near the inner canthus, now ulcerating centrally. Diagnosis?

- A Seborrhoeic keratosis
- B Squamous cell carcinoma
- C Malignant melanoma
- D Basal cell carcinoma

102 PSYCHIATRY

A woman taking lithium for bipolar disorder conceives. Which fetal cardiac anomaly is particularly associated with first-trimester lithium?

- A Transposition of great arteries
- B Tetralogy of Fallot
- C Ebstein anomaly
- D Coarctation of aorta

103 PSYCHIATRY

A chronic alcoholic is brought confused, unsteady on his feet, with nystagmus and lateral gaze palsy. Immediate treatment?

- A Intramuscular haloperidol
- B Oral disulfiram
- C Intravenous dextrose alone
- D Intravenous thiamine

104 PSYCHIATRY

A man with schizophrenia has not improved after adequate trials of two different antipsychotics. Drug of choice now?

- A Clozapine
- B Haloperidol
- C Trifluoperazine
- D Chlorpromazine

105 PSYCHIATRY

A 75-year-old, two days after hip surgery, becomes acutely confused, inattentive and sees things, worse at night with lucid spells. Diagnosis?

- A Major depressive disorder
- B Delirium
- C Late-onset schizophrenia
- D Alzheimer dementia

106 PSYCHIATRY

A 3-year-old has poor eye contact, delayed speech, no pretend play and insists on lining up toys in the same order. Most likely diagnosis?

- A Conduct disorder
- B Attention-deficit hyperactivity disorder
- C Autism spectrum disorder
- D Specific learning disorder

Answer key

One-line explanations follow each answer.

1	A	Erythema marginatum is one of the five major Jones criteria for acute rheumatic fever.
2	B	Staphylococcus aureus is the leading cause of endocarditis in IV drug users, often on the tricuspid valve.
3	C	An HbA1c of 6.5% or higher is diagnostic of diabetes; 5.7 to 6.4% indicates prediabetes.
4	D	Insulin drives potassium into cells, so it is withheld until potassium is at least 3.3 mmol/L.
5	A	Lambert-Eaton syndrome, often with small cell lung cancer, is caused by antibodies to presynaptic voltage-gated calcium channels.
6	B	Alpha-blockade must come first; a beta-blocker alone can cause unopposed alpha effect and hypertensive crisis.
7	C	Oral nimodipine reduces delayed cerebral ischaemia and improves outcome after subarachnoid haemorrhage.
8	D	Failure of GH to suppress after oral glucose confirms acromegaly.
9	A	Systolic BP is maintained in classes I-II and first falls in class III, at 30-40% blood volume loss.
10	B	Fibroadenoma is the commonest benign breast tumour in young women and is characteristically very mobile.
11	C	Suspected testicular torsion needs immediate surgical exploration to save the testis.
12	D	Manometry shows failed lower oesophageal sphincter relaxation and aperistalsis, confirming achalasia.
13	A	Perthes test checks deep vein patency; varicose surgery is unsafe if the deep veins are blocked.
14	A	Ruptured ectopic pregnancy with haemodynamic shock requires immediate surgery.
15	B	Laparoscopy with direct visualisation (and biopsy) is the gold standard for diagnosing endometriosis.
16	C	The interstitial portion is surrounded by myometrium, so it can expand longer before rupturing, with heavy bleeding.
17	D	PCOS shows raised LH relative to FSH, raised androgens and low SHBG.
18	A	Estrogen-containing methods are contraindicated after venous thromboembolism, whereas the copper IUD has no thrombotic risk.
19	B	Heart rate below 60/min despite effective ventilation is the indication for chest compressions.
20	C	Prostaglandin synthesis inhibitors such as indomethacin or ibuprofen close a patent ductus arteriosus in preterms.
21	D	Minimal change disease is the commonest cause of nephrotic syndrome in young children and presents with pure nephrotic features.

22	A	Bilateral pitting oedema defines severe acute malnutrition regardless of other measurements.
23	B	Biliary atresia needs early Kasai portoenterostomy to restore bile drainage.
24	A	ALL is the commonest childhood leukaemia and presents with marrow failure, bone pain and organomegaly.
25	B	Depleted stores lower ferritin while transferrin synthesis rises, increasing TIBC.
26	C	The Arthus reaction is a localised immune-complex vasculitis, a type III reaction.
27	D	Goodpasture syndrome antibodies target the alpha-3 chain of type IV collagen in glomerular and alveolar basement membranes.
28	A	Medulloblastoma is a cerebellar embryonal tumour of children composed of small round blue cells forming Homer Wright rosettes.
29	B	G6PD deficiency is X-linked recessive and causes oxidant drug-induced haemolysis in males.
30	C	Idarucizumab is a monoclonal antibody fragment that binds and neutralises dabigatran.
31	D	Mesna binds acrolein, the cyclophosphamide metabolite that damages the bladder.
32	A	Furosemide is a loop diuretic that blocks NKCC2 in the thick ascending limb.
33	B	Linezolid, an oxazolidinone, uniquely blocks formation of the 70S initiation complex.
34	C	Propylthiouracil is preferred in the first trimester because carbimazole/methimazole carry a risk of embryopathy.
35	D	Pralidoxime (an oxime) regenerates acetylcholinesterase if given before ageing of the enzyme occurs.
36	A	Mucormycosis by Rhizopus/Mucor shows broad aseptate right-angle branching hyphae and invades vessels causing necrosis.
37	B	Shiga-like toxin of E. coli O157:H7 damages endothelium, causing haemolytic uraemic syndrome.
38	C	Bacteraemia is highest in the first week, so blood culture is most often positive then.
39	D	IgG is the only immunoglobulin actively transported across the placenta.
40	A	Subacute sclerosing panencephalitis is a late persistent measles virus infection of the brain.
41	B	Low-risk HPV types 6 and 11 cause most genital warts, while 16 and 18 cause cervical cancer.
42	C	These are features of von Gierke disease (type I), caused by glucose-6-phosphatase deficiency.
43	D	Phenylketonuria is due to phenylalanine hydroxylase deficiency and causes a mousy odour and reduced pigmentation.
44	A	This is Wernicke encephalopathy, caused by thiamine (vitamin B1) deficiency.
45	B	Oligomycin blocks the proton channel of ATP synthase, while the others inhibit complexes I, III and IV.
46	C	Vitamin K is the cofactor for gamma-glutamyl carboxylase, which activates factors II, VII, IX and X.

47	D	Menkes disease is an X-linked defect of the ATP7A copper transporter.
48	D	Raising extracellular K ⁺ reduces the K ⁺ gradient, so the K ⁺ equilibrium potential, which sets the resting potential, becomes less negative.
49	A	The Golgi tendon organ senses tension and causes reflex inhibition of the contracting muscle (inverse stretch reflex).
50	B	Dipalmitoylphosphatidylcholine (lecithin) is the principal component of surfactant that lowers alveolar surface tension.
51	C	About two-thirds of filtered sodium and water are reabsorbed in the proximal convoluted tubule.
52	D	Hypoxic hyperventilation washes out CO ₂ , producing respiratory alkalosis.
53	A	Oxytocin contracts myoepithelial cells around the alveoli, causing milk ejection.
54	B	Inhibin from Sertoli cells gives negative feedback mainly on FSH secretion from the anterior pituitary.
55	A	The axillary nerve winds round the surgical neck and supplies deltoid and the skin over its lower part.
56	B	The radial nerve runs in the spiral groove of the humeral shaft and supplies the wrist extensors.
57	C	Stylopharyngeus is the only muscle of the third arch and is supplied by the glossopharyngeal nerve.
58	D	Cricothyroid is the only intrinsic laryngeal muscle not supplied by the recurrent laryngeal nerve.
59	A	Glossopharyngeal fibres reach the otic ganglion via the lesser petrosal nerve and then the parotid via the auriculotemporal nerve.
60	B	The arcuate fasciculus links Wernicke's and Broca's areas, and its lesion causes conduction aphasia with impaired repetition.
61	C	The superior gluteal nerve supplies gluteus medius and minimus, which hold the pelvis level on the stance side.
62	A	A line diagram is the best way to show the trend of an event over time.
63	B	Mean, median and mode measure central tendency, while SD, range and variance measure dispersion.
64	C	A case-control study cannot measure incidence, so the odds ratio is used to estimate relative risk.
65	D	Sharps such as needles and blades go into the white translucent puncture-proof container.
66	A	MMR is a live attenuated vaccine and live vaccines are avoided in pregnancy.
67	B	An NRR of 1 means replacement-level fertility, roughly equal to a TFR of 2.1.
68	C	Pearl index = accidental pregnancies x 1200 / months of exposure, i.e. failures per 100 woman-years.
69	D	Oedema with skin and hair changes is characteristic of kwashiorkor and is absent in marasmus.
70	C	Cyanide blocks cytochrome oxidase, stopping cellular oxygen use.
71	D	Datura causes anticholinergic poisoning, reversed by the centrally acting anticholinesterase physostigmine.

72	A	In hanging the ligature rises toward the knot, leaving an oblique, interrupted mark high on the neck.
73	B	Gustafson's method assesses regressive dental changes to estimate age in adults.
74	C	Custodial deaths require a magistrate's inquest rather than a police inquest.
75	D	For 20-24 weeks in special categories such as rape survivors, two registered medical practitioners must agree.
76	A	Suspected juvenile nasopharyngeal angiofibroma is highly vascular, so biopsy risks severe bleeding and is contraindicated.
77	B	The posterior cricoarytenoid is the sole abductor of the vocal cords, so its bilateral paralysis causes airway obstruction.
78	C	A sensorineural notch at 4 kHz is the characteristic audiometric sign of noise-induced hearing loss.
79	D	This is Meniere's disease, whose pathology is distension of the endolymphatic system (endolymphatic hydrops).
80	A	In conductive hearing loss the Weber test lateralises to the affected ear.
81	B	Congruous homonymous hemianopia with macular sparing points to the occipital cortex opposite the field defect.
82	C	Laser peripheral iridotomy equalises pressure between the chambers and prevents angle closure in the fellow eye.
83	D	Superotemporal (upward) lens subluxation is typical of Marfan syndrome, while homocystinuria displaces the lens downward.
84	A	Herbert's pits are scarred limbal follicles and are pathognomonic of trachoma.
85	B	Acute anterior uveitis with ankylosing spondylitis is strongly associated with HLA-B27.
86	B	Colles fracture is a distal radius fracture with dorsal displacement, giving the dinner-fork deformity.
87	C	Dashboard injury drives the femoral head backwards, producing flexion, adduction and internal rotation.
88	D	Demonstrating monosodium urate crystals in joint fluid is diagnostic; serum urate can be normal in an attack.
89	A	Giant cell tumour is an epiphyseal lytic lesion seen after skeletal maturity, classically around the knee.
90	B	Etomidate inhibits 11-beta-hydroxylase, suppressing cortisol synthesis.
91	C	Dantrolene blocks calcium release via the ryanodine receptor, treating malignant hyperthermia.
92	D	Jaw thrust opens the airway without moving the cervical spine.
93	A	Dibucaine is the most potent and longest-acting local anaesthetic, whereas chlorprocaine is the shortest.
94	B	Cells are most radiosensitive in G2 and mitosis and most resistant in late S phase.
95	C	I-131 emits beta particles that destroy thyroid tissue, so it is used for therapy.

96	D	Micturating cystourethrogram directly shows contrast refluxing into the ureters during voiding and grades it.
97	D	Lymphogranuloma venereum, caused by <i>C. trachomatis</i> L1-L3, produces the groove sign.
98	A	Munro microabscesses are neutrophil collections in the stratum corneum, characteristic of psoriasis.
99	B	Type 2 reaction (ENL) occurs in lepromatous leprosy with fever and tender erythematous nodules.
100	C	Scabies is treated with permethrin applied to the whole family at the same time.
101	D	A pearly, rolled-edge ulcerating nodule on the sun-exposed central face is the classic rodent ulcer of basal cell carcinoma.
102	C	First-trimester lithium exposure is classically linked to Ebstein anomaly of the tricuspid valve.
103	D	Wernicke encephalopathy is due to thiamine deficiency, and thiamine must be given before glucose.
104	A	Clozapine is the drug of choice for treatment-resistant schizophrenia.
105	B	Acute onset, fluctuating attention and consciousness and visual hallucinations in a medically ill patient indicate delirium.
106	C	Impaired social communication with restricted, repetitive behaviour from early childhood defines autism spectrum disorder.

Questions that came back

94 questions that were asked again in a later session. Wording changes from session to session, so the first version is shown. Questions only.

- 1 A female patient presented with pain and redness in great toe. Serum uric acid level is 9.4 mg/dL. The physician prescribed a drug for the treatment. Which of the followi

Asked in 3 sessions: 2020 Aug, 2021 Jun, 2022 Dec

- 2 Which of the following pass through guyon's canal?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 3 All of the following is true regarding crohn's disease except?

Asked in 2 sessions: 2017 Dec, 2019 Dec

- 4 Corocoid process of scapula is a example of?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 5 Which of the following is the carbonic anhydrase inhibitor is anti glaucogenic?

Asked in 2 sessions: 2017 Dec, 2019 Dec

- 6 Which of the following is not a component of superior mediastinum?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 7 Which of the following is not a component of carpel tunnel?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 8 Treatment of choice for atrophic rhinitis is?

Asked in 2 sessions: 2017 Dec, 2020 Dec

- 9 Most common site of peripheral artery aneurysm is?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 10 Skin of the parotid gland is supplied by which of the following nerve?

Asked in 2 sessions: 2017 Dec, 2019 Jun

- 11 Most common cause of facial nerve palsy is?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 12 Most common site for the development of laryngeal web is?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 13 Rise in JVP with inspiration is seen with all except?

Asked in 2 sessions: 2017 Dec, 2019 Dec

- 14 Adult Polycystic disease of kidney may have cysts in all of the following organs except?

Asked in 2 sessions: 2017 Dec, 2018 Jun

- 15 Value of free residual chlorine in Drinking water should be:

Asked in 2 sessions: 2018 Jun, 2024 Jun

-
- 16 Molluscum contagiosum is caused by
Asked in 2 sessions: 2018 Jun, 2019 Jun
-
- 17 Optic disc changes of retinitis pigmentosa:
Asked in 2 sessions: 2018 Jun, 2019 Jun
-
- 18 Drug of choice for central diabetes insipidus is:-
Asked in 2 sessions: 2018 Jun, 2019 Jun
-
- 19 Therapeutic index of a drug is an indicator of:-
Asked in 2 sessions: 2018 Jun, 2022 Dec
-
- 20 Floating water lily sign is seen in:
Asked in 2 sessions: 2018 Jun, 2020 Aug
-
- 21 Multiple punched out lesions in skull is seen in:
Asked in 2 sessions: 2018 Jun, 2020 Aug
-
- 22 Which one of the following is NOT a characteristic feature of bacterial vaginosis?
Asked in 2 sessions: 2018 Jun, 2019 Dec
-
- 23 Increased LH: FSH ratio is seen in
Asked in 2 sessions: 2018 Jun, 2019 Dec
-
- 24 Condyloma acuminata is caused by:
Asked in 2 sessions: 2018 Jun, 2021 Dec
-
- 25 Ammonia is detoxified in brain by:
Asked in 2 sessions: 2018 Jun, 2019 Dec
-
- 26 Adam's apple seen in boys is because of:
Asked in 2 sessions: 2018 Jun, 2019 Dec
-
- 27 All of the following are seen in Meniere's Disease except:
Asked in 2 sessions: 2018 Jun, 2019 Dec
-
- 28 Lifesaving muscle of vocal cords is:
Asked in 2 sessions: 2018 Jun, 2019 Jun
-
- 29 Vitamin B12 deficiency can lead to all EXCEPT:
Asked in 2 sessions: 2018 Jun, 2019 Dec
-
- 30 Obstructive lung function is seen in which of the following condition?
Asked in 2 sessions: 2018 Jun, 2021 Dec
-
- 31 Paget's disease of the nipple is:-
Asked in 2 sessions: 2018 Jun, 2018 Dec
-
- 32 Lucid interval is classically seen in:-
Asked in 2 sessions: 2018 Jun, 2021 Dec
-
- 33 The drug that causes fall in elderly patients with postural hypotension is:
Asked in 2 sessions: 2018 Dec, 2019 Dec
-

34	Acute graft rejection occurs within?	Asked in 2 sessions: 2018 Dec, 2019 Jun
35	Exenatide is a new drug used in diabetes mellitus. Mechanism of action of this drug is:	Asked in 2 sessions: 2018 Dec, 2019 Dec
36	A patient was given anti-cancer therapy and developed neutropenia. Which of the following drug can be used to prevent neutropenia in next cycle of chemotherapy?	Asked in 2 sessions: 2018 Dec, 2022 Dec
37	DNA transfer in bacteria via phage is:	Asked in 2 sessions: 2018 Dec, 2019 Jun
38	Sporulation occurs in this phase of bacterial growth curve:	Asked in 2 sessions: 2018 Dec, 2019 Jun
39	Which of the following is the most likely cause in a case of granuloma?	Asked in 2 sessions: 2018 Dec, 2019 Jun
40	N. meningitis can be due to deficiency of this complement system:	Asked in 2 sessions: 2018 Dec, 2019 Jun
41	Which of the following activates classical complement?	Asked in 2 sessions: 2018 Dec, 2019 Jun
42	Human anatomical wastes are disposed in ____ BMW (Bio Medical Waste) category	Asked in 2 sessions: 2018 Dec, 2021 Jun
43	A patient presented with 2 days history of fever. On examination there was swelling in the neck and one side tonsil was pushed to midline. What is the most likely diagnosis?	Asked in 2 sessions: 2018 Dec, 2019 Jun
44	Continuous murmur is heard in?	Asked in 2 sessions: 2018 Dec, 2019 Jun
45	Menke's disease is due to defect in the metabolism of:-	Asked in 2 sessions: 2018 Dec, 2021 Dec
46	Which is correct about larval stage of taenia solium?	Asked in 2 sessions: 2018 Dec, 2019 Jun
47	Reversible dementia is seen in?	Asked in 2 sessions: 2018 Dec, 2019 Dec
48	Killian's Dehiscence is seen at the level of:	Asked in 2 sessions: 2019 Jun, 2021 Jun
49	Most characteristic finding of diabetic nephropathy?	Asked in 2 sessions: 2019 Jun, 2019 Dec
50	Nitric oxide is derived from:	Asked in 2 sessions: 2019 Jun, 2020 Aug

51	Amount of sodium in ORS as per WHO: Asked in 2 sessions: 2019 Jun, 2020 Aug
52	Ectopic pregnancy lasts longer at which site: Asked in 2 sessions: 2019 Dec, 2022 Dec
53	Recycling, tubing and recyclable catheters will be disposed in which bag according to biomedical waste management? Asked in 2 sessions: 2019 Dec, 2025 Dec
54	Melanin is derived from which amino acid? Asked in 2 sessions: 2019 Dec, 2022 Dec
55	Type IV complex of ETC is inhibited by; Asked in 2 sessions: 2019 Dec, 2020 Dec
56	Monoclonal antibody used in cancer is Asked in 2 sessions: 2019 Dec, 2020 Dec
57	After injury hair bulbs are seen crushed under microscopy. Probable type of wound; Asked in 2 sessions: 2019 Dec, 2022 Jun
58	Exclamation mark hair pattern is seen in Asked in 2 sessions: 2019 Dec, 2021 Jun
59	Which patient has better prognosis in breast cancer? Asked in 2 sessions: 2019 Dec, 2021 Dec
60	Ductus arteriosus develops from which pharyngeal arch artery? Asked in 2 sessions: 2020 Aug, 2024 Jun
61	Macrocytic anaemia case with normal methyl-malonyl with increased level of homocysteine. What is the diagnosis? Asked in 2 sessions: 2020 Aug, 2021 Jun
62	Minimum number of Antenatal visits required are; Asked in 2 sessions: 2020 Aug, 2024 Jun
63	A patient presented with morning stiffness of the joints and investigations revealed that the patient is suffering from rheumatoid arthritis. The physician is thinking to Asked in 2 sessions: 2020 Aug, 2020 Dec
64	A female presented with burning micturition and symptoms of UTI. Which fluoroquinolones is least likely to be effective? Asked in 2 sessions: 2020 Aug, 2020 Dec
65	Comment on serological report of this hepatitis B patient IgG Anti HBc Positive HBsAg Negative HBeAg Negative Anti HBs positive Asked in 2 sessions: 2020 Aug, 2025 Jun
66	A female patient with dysphagia, Barium swallow image is shown, what is the likely diagnosis? Asked in 2 sessions: 2020 Aug, 2021 Jun

67	A Patient with prostate cancer receives sequential radiotherapy at a dose of 1.8-2.4 Gy for 5 days every week, for 5-7 weeks this is called as?	Asked in 2 sessions: 2020 Aug, 2022 Dec
68	Enzyme deficiency in von gierke's disease?	Asked in 2 sessions: 2020 Dec, 2022 Dec
69	You are a medical officer and now you have to check an ANM worker's ability to do immunization which has been given training. She is having cotton, syringe-needle and lun	Asked in 2 sessions: 2020 Dec, 2025 Jun
70	Which of the following is a radio sensitive tumor?	Asked in 2 sessions: 2020 Dec, 2024 Jun
71	JVP Image shows deep x descent and a rapid y descent and elevated over all. What could be the diagnosis?	Asked in 2 sessions: 2020 Dec, 2021 Jun
72	Pressure – volume graph given and asked to find out A accordingly:	Asked in 2 sessions: 2020 Dec, 2021 Jun
73	Which part of nephron does water reabsorption takes place more:	Asked in 2 sessions: 2020 Dec, 2021 Jun
74	Inhibition of Na +/ K+ ATPase pump results in which of the following?	Asked in 2 sessions: 2020 Dec, 2021 Jun
75	A post covid-19 patient started to develop nasal congestion, black crusts in nose, and blackish discoloration of skin on nasal and cheek area. Which of the following micr	Asked in 2 sessions: 2020 Dec, 2021 Jun
76	A child presented with a high arched palate and mouth breathing and failure to thrive. The probable diagnosis is?	Asked in 2 sessions: 2020 Dec, 2021 Dec
77	MARASMUS IS REPORTED IN INDIAN CHILDREB MAINLY DUE TO?	Asked in 2 sessions: 2021 Jun, 2021 Dec
78	Cherry red colour post-mortem staining is associated with what poisoning ?	Asked in 2 sessions: 2021 Jun, 2022 Dec
79	A 10-year-old child is diagnosed with amblyopia in one eye. What will be the best treatment?	Asked in 2 sessions: 2021 Jun, 2022 Dec
80	Low stationary phase of demographic cycle?	Asked in 2 sessions: 2021 Jun, 2022 Dec
81	A 35 years old male presented with scrotal enlargement on investigation, LDH was significantly high but the HCG and alpha fetoprotein were within normal limits .histopatho	Asked in 2 sessions: 2021 Jun, 2021 Dec
82	What is the radioisotope used in PET scan ?	Asked in 2 sessions: 2021 Jun, 2024 Jun

83	The number of maternal deaths per 1,00,000 live birth is?
	Asked in 2 sessions: 2021 Dec, 2022 Jun
84	A 65 year old Female patient presented with a red mass behind tympanic membrane with pulsatile tinnitus the diagnosis could be?
	Asked in 2 sessions: 2021 Dec, 2022 Dec
85	According to MTP act 2021 guidelines, MTP can be done up to how many weeks ?
	Asked in 2 sessions: 2021 Dec, 2022 Jun
86	Banana shaped gametocyte and ring form in Rbc's :
	Asked in 2 sessions: 2021 Dec, 2024 Jun
87	A man presented with red rashes after bee sting. He has presented with edema and redness on face . which of the following antibody is responsible for this reaction ?
	Asked in 2 sessions: 2021 Dec, 2022 Jun
88	Location of Bartholin's gland opening/Bartholin cyst ?
	Asked in 2 sessions: 2021 Dec, 2024 Jun
89	B/L ptosis of eyelid with diurnal variation and more symptomatic in evening.it improves on ice pack test. Diagnosis
	Asked in 2 sessions: 2022 Jun, 2025 Jun
90	Necrolytic migratory erythema is seen in
	Asked in 2 sessions: 2022 Jun, 2022 Dec
91	Which of the following is a feature of Gaisbock syndrome?
	Asked in 2 sessions: 2022 Dec, 2024 Jun
92	Codman's triangle is seen in which of the following conditions?
	Asked in 2 sessions: 2024 Jun, 2025 Dec
93	A newborn presents with hypotonia, upward slanting palpebral fissures, a round facial profile, flat nasal bridge, and curved small fingers. What is the most likely diagno
	Asked in 2 sessions: 2025 Jun, 2025 Dec
94	What type of energy is used in a Linear Accelerator for cancer treatment?
	Asked in 2 sessions: 2025 Jun, 2025 Dec