BLOCK Q OSPE

Complete Exam-Style Guide – 54 Stations

STATIC STATIONS = "DIAGNOSIS → INVESTIGATIONS → MANAGEMENT → COMPLICATIONS"

Includes: Medicine | Surgery | Paediatrics | Neurosurgery/Neuro | Psychiatry

How to use: Read the "Scenario Given" first, then answer in the order shown.

Tip: In OSPE, examiners often jump to "complication" or "next investigation" randomly. Use the "Viva Rapid-Fire" box.

Crafted with ❤ Noaman Khan Musakhel

STATION 1 – MEDICINE STATIC

CT Brain – Ischemic Stroke

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Non-contrast CT Brain shown on station. You are asked to:

- State the **main CT findings** and **vascular territory**.
- Give the **most likely diagnosis**.
- List **investigations** (urgent + secondary).
- Give **stepwise management** (acute + secondary prevention).
- List **complications**.

KEY CT FINDINGS

Early (0–6h)

- **Hyperdense MCA sign** (acute thrombus).
- **Loss of insular ribbon** (MCA).
- **Obscuration of lentiform nucleus**.
- **Sulcal effacement** (edema).

Established (>6h)

- **Hypodensity** in a vascular territory.
- **Loss of grey–white differentiation**.
- **Mass effect** / midline shift (large infarct).
- **Hemorrhagic transformation** (patchy hyperdensity) is a red flag.

Territory clues: MCA (lateral hemisphere, basal ganglia/internal capsule), ACA (medial frontal/parietal), PCA (occipital/medial temporal), posterior circulation (brainstem/cerebellum).

EXPECTED DIAGNOSIS

Acute ischemic stroke (likely MCA territory unless otherwise stated).
Always state: “Non-contrast CT shows no acute bleed → eligible for ischemic stroke pathway, then confirm LVO on CTA if indicated.”

INVESTIGATIONS

Immediate (do not delay reperfusion)

- RBS (rule out hypoglycemia), temperature.
- BP, ECG (AF), SpO_2.
- Baseline labs: FBC, U&E, creatinine, PT/INR, aPTT (esp. anticoagulants), troponin if indicated.
- **CT angiography** head/neck (suspected large vessel occlusion) ± CT perfusion if protocol.

Secondary work-up

- Carotid Doppler (if not already by CTA).
- Echocardiography (cardioembolic source) if indicated.
- Lipid profile, HbA1c.
- Swallow assessment (before oral intake).

MANAGEMENT (STEPWISE)

Step 1: Stabilize

- ABC, oxygen only if hypoxic, IV access, NPO until swallow screen.
- Control fever, treat hypoglycemia/hyperglycemia.

Step 2: Reperfusion decision

- **IV thrombolysis** if within 4.5 hours and no contraindication (BP target <185/110 before thrombolysis).
- **Mechanical thrombectomy** for LVO within 6 hours (and selected patients up to 24 hours per imaging/criteria).

Step 3: Antithrombotics

- If thrombolysed: no antiplatelet/anticoagulant for first 24h; repeat CT then start aspirin.
- If not thrombolysed: aspirin early after CT excludes bleed.
- AF: anticoagulate later (timing depends on infarct size; avoid immediate in large infarcts).

Step 4: Prevent complications

- DVT prophylaxis (early mobilization; pharmacologic after bleed excluded and stable).
- Aspiration precautions, chest physio if needed.
- Manage raised ICP in malignant MCA infarct (neuro referral, consider decompressive hemicraniectomy in selected).

Step 5: Secondary prevention

- High-intensity statin, BP control, diabetes control, smoking cessation.
- Rehab: physiotherapy, OT, speech therapy.

COMPLICATIONS

- **Hemorrhagic transformation** (worsening headache, decline).
- Cerebral edema, herniation, seizures.
- Aspiration pneumonia, DVT/PE, pressure sores.
- Long-term: spasticity, depression, cognitive decline.

VIVA RAPID-FIRE

- “First imaging?” → **Non-contrast CT brain**.
- “Hyperdense MCA sign means?” → **Thrombus** in MCA.
- “When to do thrombectomy?” → **LVO** + within time window + suitable imaging.
- “Big mistake?” → Giving thrombolysis without excluding bleed; or missing hemorrhagic transformation.

STATION 2 – MEDICINE STATIC

CT Brain – Hemorrhagic Stroke (ICH)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Non-contrast CT shows intracerebral hemorrhage. You must describe:

- Site (basal ganglia / thalamus / lobar / cerebellar / brainstem)
- Mass effect, midline shift, IVH, hydrocephalus
- Diagnosis, urgent investigations, stepwise management, complications

KEY CT FINDINGS

- **Acute blood = hyperdense** (bright white) on non-contrast CT.
- **Basal ganglia** (hypertensive bleed commonest): putamen/capsule region.
- **Lobar bleed**: consider amyloid angiopathy, AVM, tumor, anticoagulants.
- **IVH** (blood in ventricles) and **hydrocephalus** worsen prognosis.
- **Cerebellar bleed** with hydrocephalus = emergency decompression/EVD consideration.

EXPECTED DIAGNOSIS

Intracerebral hemorrhage (hemorrhagic stroke) ± intraventricular extension.

INVESTIGATIONS

Immediate

- Airway, vitals, GCS, pupils.
- FBC, U&E, glucose, coagulation profile.
- Type & screen/crossmatch if large bleed.
- ECG.

Cause evaluation

- **CTA/CT venography** if young, lobar, atypical site, suspected AVM/aneurysm/venous thrombosis.
- Toxicology/medication review (anticoagulants, antiplatelets).

MANAGEMENT (STEPWISE)

Step 1: Stabilize

- ABC, head-up 30°, manage airway if GCS ≤8.
- Control fever, glucose, treat seizures if present.

Step 2: BP control

- Target systolic often around **140–160** depending on protocol and perfusion; avoid rapid overcorrection.

Step 3: Reverse anticoagulation

- Warfarin: **PCC + vitamin K**.
- DOACs: specific reversal if available (institutional).

- Platelet issue: treat thrombocytopenia as per protocol.

Step 4: Neurosurgical decision

- Cerebellar hemorrhage with deterioration/hydrocephalus → urgent decompression.
- Hydrocephalus/IVH + low consciousness → consider **EVD**.
- Lobar superficial hematoma + worsening → selected evacuation.

Step 5: ICU monitoring

- Neuro observations, manage raised ICP if present.
- DVT prophylaxis timing as per stability and neurosurgical advice.

COMPLICATIONS

- Hematoma expansion (first 24h), raised ICP, herniation.
- Seizures, aspiration pneumonia.
- Hydrocephalus (especially with IVH).
- Long-term disability, depression.

VIVA RAPID-FIRE

- “Bright white on CT = ?” → **Acute bleed**.
- “Most common site in HTN?” → **Basal ganglia (putamen)**.
- “Key first step?” → **ABC + BP control + reversal**.

STATION 3 – SURGERY STATIC

X-ray Abdomen – Intestinal Obstruction

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Supine/erect abdominal X-ray shown. You are asked:

- Give **radiological findings**.
- State **diagnosis** (SBO vs LBO, simple vs strangulated).
- List **investigations**.
- Give **stepwise management**.
- List **complications**.

KEY X-RAY FINDINGS

SBO

- Central dilated loops >3 cm.
- **Valvulae conniventes** cross entire lumen.
- Multiple air-fluid levels (erect): “stepladder”.
- Little/absent colonic gas.

LBO

- Peripheral dilated colon.
- **Haustra** do not cross lumen.
- Cecum >9 cm = perforation risk.
- Volvulus: “coffee bean” (sigmoid).

Red flags for strangulation/ischemia: severe pain, fever, tachycardia, peritonitis, leukocytosis, metabolic acidosis, persistent localized tenderness.

EXPECTED DIAGNOSIS

Intestinal obstruction (state SBO/LBO) and add: “simple vs strangulated” if clues suggest ischemia.

INVESTIGATIONS

Bedside + labs

- Vitals, urine output (Foley).
- FBC, U&E, CRP, lactate/ABG (ischemia), group & save.

Imaging

- **CT abdomen with contrast** = best to find transition point, ischemia, closed-loop.
- AXR is screening only; do not stop there if unwell.

MANAGEMENT (STEPWISE)

Step 1: Resuscitate

- ABC, NPO, large-bore IV access, IV crystalloids.
- NG tube decompression if vomiting/distension.
- Analgesia + antiemetic, correct electrolytes.

Step 2: Decide conservative vs operative

- **Conservative** (adhesive partial SBO, stable, no peritonitis): NG, fluids, serial exams, input/output charting, repeat imaging if needed.
- **Operate urgently** if: peritonitis, strangulation, closed-loop, complete obstruction, worsening vitals/lactate, or failure of conservative management (usually 48–72h).

Step 3: Definitive

- SBO: adhesiolysis, hernia repair, resection if ischemic bowel.
- LBO: treat cause (tumor resection/stent, volvulus decompression then definitive surgery).

COMPLICATIONS

- Bowel ischemia/necrosis, perforation, sepsis.
- Electrolyte derangements, aspiration.
- Short bowel syndrome (after resection), recurrence (adhesions).

VIVA RAPID-FIRE

- "Best test to find transition point?" → **CT abdomen with contrast**.
- "Cecum danger size?" → **>9 cm**.
- "Absolute indication for surgery?" → **Peritonitis/strangulation**.

STATION 4 – NEUROSURGERY STATIC

CT Head – Depressed Skull Fracture

KMU FINAL YEAR MBBS

SCENARIO GIVEN

CT head displayed. You must:

- Describe fracture type and depth.
- Look for associated intracranial injuries (contusion, EDH/SDH, pneumocephalus).
- Give diagnosis, investigations, stepwise management, complications.

KEY CT FINDINGS

- **Depressed fracture**: inner table displaced inward ("punched-in").
- **Open fracture/contamination**: scalp laceration + air pockets.
- **Pneumocephalus**: suggests dural tear.
- Always assess for **EDH** (biconvex), **SDH** (crescent), contusions.
- Basilar signs: consider CSF rhinorrhea/otorrhea, Battle sign, raccoon eyes (clinical).

EXPECTED DIAGNOSIS

Depressed skull fracture ± dural tear ± intracranial hematoma (state what you see).

INVESTIGATIONS

- ATLS primary survey + GCS.
- CT head (already), consider CT cervical spine if trauma.
- FBC, coagulation profile, group & save.
- Consider CT angiography if vascular injury suspected (mechanism/site).

MANAGEMENT (STEPWISE)

Step 1: Stabilize

- Airway protection if low GCS, control bleeding, analgesia.
- Head elevation, treat raised ICP if signs.

Step 2: Antibiotics + tetanus (if open)

- Broad coverage per protocol, tetanus prophylaxis.

Step 3: Neurosurgical decision

- **Operate** if: open fracture, depression deeper than skull thickness, dural tear/CSF leak, pneumocephalus with contamination, neurological deficit, significant cosmetic deformity, underlying hematoma needing evacuation.
- Procedure: elevation, debridement, dural repair, evacuation if needed.

Step 4: Observe (selected)

- Closed, minimal depression, no deficit, clean wound → observe with neuro checks.

COMPLICATIONS

- Seizures, intracranial infection (meningitis/abscess), CSF leak.
- EDH/SDH, contusion progression, raised ICP.
- Cosmetic deformity, post-traumatic epilepsy.

VIVA RAPID-FIRE

- "Air inside skull on CT?" → **Pneumocephalus** (dural tear).
- "When to operate?" → **Open + dural tear + deep depression + deficit**.

STATION 5 – NEUROSURGERY STATIC

CT Head – Extradural (Epidural) Hematoma

KMU FINAL YEAR MBBS

SCENARIO GIVEN

CT head displayed. You are asked:

- Describe the collection and mass effect.
- Give diagnosis, investigations, stepwise management, complications.

KEY CT FINDINGS

- **Biconvex / lens-shaped** hyperdense collection.
- **Does not cross suture lines** (dural attachment).
- Often temporal region with skull fracture (middle meningeal artery).
- Signs of raised ICP: midline shift, ventricular compression.
- **Swirl sign** may suggest active bleeding (mixed density).

EXPECTED DIAGNOSIS

Epidural (extradural) hematoma causing mass effect.

INVESTIGATIONS

- ATLS + repeated neuro obs, GCS trend.
- Coagulation profile, group & save.
- Consider CT C-spine if trauma context.

MANAGEMENT (STEPWISE)

Step 1: Stabilize

- ABC, intubate if GCS ≤8 or deteriorating.
- Head up 30°, manage hypotension/hypoxia aggressively.

Step 2: Treat impending herniation (temporary)

- Hypertonic saline or mannitol if clinical herniation signs (as per protocol).
- Short-term hyperventilation only as a bridge (specialist-led).

Step 3: Definitive neurosurgery

- **Urgent craniotomy** and evacuation + control bleeding source.
- Reverse anticoagulation if present.

COMPLICATIONS

- Uncal herniation (CN III palsy), brainstem compression, death.
- Seizures, recurrence/expansion, infection.

VIVA RAPID-FIRE

- “Classic story?” → LOC → lucid interval → deterioration (not always present).
- “Shape?” → **Biconvex**.
- “Emergency treatment?” → **Craniotomy**.

STATION 6 – MEDICINE INTERACTIVE

Lower Limb Motor Examination

KMU FINAL YEAR MBBS

CANDIDATE INSTRUCTIONS

Perform a complete lower limb motor examination in an OSPE style: inspection → tone → power (MRC) → reflexes → plantar → coordination. State findings and localize (UMN vs LMN).

STEPWISE EXAMINATION

- **Introduce, consent, expose** (hips to feet), pain check.
- **Inspection**: wasting, fasciculations, scars, posture, foot drop.
- **Tone**: hip/knee/ankle passive movement (spasticity vs rigidity).
- **Power (MRC 0–5)**:
  - Hip flexion (L2–3), hip extension (L5–S1)
  - Knee extension (L3–4), knee flexion (L5–S1)
  - Ankle dorsiflexion (L4–5), plantarflexion (S1–2)
  - Great toe extension (L5)
- **Reflexes**: knee (L3–4), ankle (S1–2), clonus.
- **Plantar**: Babinski.
- **Coordination**: heel–shin.

SPECIAL SIGNS

- **Clonus** + hyperreflexia = UMN.
- **Fasciculations** + wasting = LMN.
- **Foot drop** suggests common peroneal nerve palsy or L5 radiculopathy.

LOCALIZATION SUMMARY

UMN: spasticity, hyperreflexia, clonus, upgoing plantar, minimal wasting.
LMN: hypotonia, hyporeflexia, wasting, fasciculations, downgoing plantar.

STATION 7 – MEDICINE INTERACTIVE

Lower Limb Neurological Examination (Motor + Sensory + Gait)

KMU FINAL YEAR MBBS

CANDIDATE INSTRUCTIONS

Perform a complete lower limb neurological exam: motor, reflexes, sensory modalities, coordination, and gait. End with a clear localization and differential.

STEPWISE EXAMINATION

- **Motor**: (as Station 6) tone, power, reflexes, plantar.
- **Sensory**:
  - Light touch + pinprick (dermatomes L2–S1)
  - Vibration (128 Hz tuning fork): great toe → malleolus → tibial tuberosity
  - Proprioception: great toe up/down
- **Coordination**: heel–shin, rapid foot tapping.
- **Gait**: normal, heel walk (L4/5), toe walk (S1), tandem gait.
- **Romberg**: sensory ataxia vs cerebellar.

SPECIAL SIGNS & INTERPRETATION

- **Positive Romberg** = proprioceptive/vestibular problem (sensory ataxia), not pure cerebellar.
- **Stocking-glove loss** = peripheral neuropathy.
- **Dermatomal pain + weakness** = radiculopathy.
- **Saddle anesthesia + urinary retention** = cauda equina (emergency).

CLOSE THE STATION

"I would also examine upper limbs, cranial nerves, and do a full spine exam, and check blood glucose/B12/thyroid depending on suspicion."

STATION 8 – SURGERY INTERACTIVE

Abdominal Examination (Full OSPE Sequence)

KMU FINAL YEAR MBBS

CANDIDATE INSTRUCTIONS

Perform a complete abdominal exam: inspection → palpation (light/deep) → percussion → auscultation, then relevant special tests and summary.

STEPWISE EXAMINATION

- **Introduce, consent, position** (supine, knees flexed), expose from xiphisternum to pubis.
- **Inspection**: scars, distension, visible peristalsis, hernias, stomas, caput medusae.
- **Palpation**:
  - Light palpation all quadrants for tenderness/guarding.
  - Deep palpation for masses (note site, size, surface, mobility, pulsatility).
  - Liver edge, spleen, kidneys (bimanual), aorta.
- **Percussion**: liver span, splenic dullness, shifting dullness (ascites).
- **Auscultation**: bowel sounds, bruits (aorta/renal/femoral).

SPECIAL SIGNS (HIGH-YIELD)

- **Murphy sign** (acute cholecystitis).
- **Rovsing / Psoas / Obturator** (appendicitis).
- **Fluid thrill + shifting dullness** (ascites).
- **Courvoisier sign** (painless jaundice with palpable gallbladder).

END SUMMARY

"On examination, the abdomen is … (soft/tender/distended). I found … (mass/organomegaly/ascites). I would complete by examining the hernial orifices, external genitalia if indicated, and do a PR exam."

STATION 9 – MEDICINE INTERACTIVE

General Physical Examination (GPE) + Relevant Systemic

KMU FINAL YEAR MBBS

CANDIDATE INSTRUCTIONS

Perform a focused GPE as in OSPE: appearance, vitals, hands, face, neck, chest, abdomen (brief), legs. Mention relevant exams depending on suspected disease.

STEPWISE GPE

- **General**: conscious level, distress, body build, hydration.
- **Vitals**: pulse, BP, RR, temp, SpO_2.
- **Hands**: clubbing, cyanosis, tremor, nicotine stains, palmar erythema.
- **Face**: pallor, jaundice, xanthelasma, malar rash, Cushingoid features.
- **Neck**: JVP, lymph nodes, thyroid.
- **Chest**: brief cardio-respiratory screen if needed.
- **Legs**: edema, DVT signs, pulses.

HIGH-YIELD "SPOT" SIGNS

- **Koilonychia** (iron deficiency), **Asterixis** (hepatic encephalopathy), **Kussmaul breathing** (metabolic acidosis).
- **Osler nodes/Janeway lesions** (endocarditis).

STATION 10 – TRAUMA/NEURO INTERACTIVE

ATLS Protocols + Glasgow Coma Scale (GCS)

KMU FINAL YEAR MBBS

ATLS PRIMARY SURVEY (ABCDE)

- **A**irway + C-spine protection (jaw thrust, collar).
- **B**reathing (inspect, auscultate, treat tension pneumothorax).
- **C**irculation (control hemorrhage, IV fluids/blood).
- **D**isability (GCS, pupils, glucose).
- **E**xposure (fully expose, prevent hypothermia).

GCS SCORING

Eyes (E): 4 Spontaneous | 3 To voice | 2 To pain | 1 None
Verbal (V): 5 Oriented | 4 Confused | 3 Inappropriate words | 2 Sounds | 1 None
Motor (M): 6 Obeys | 5 Localizes | 4 Withdraws | 3 Abnormal flexion | 2 Extension | 1 None

Interpretation: ≤8 severe (airway risk), 9–12 moderate, 13–15 mild.

CUSHING TRIAD (RAISED ICP) – LINK

Hypertension + bradycardia + irregular breathing = late sign of raised ICP (see Station 35).

STATION 11 – PSYCHIATRY STATIC

Schizophrenia Scenario (Diagnosis + Treatment + Non-compliance)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

A patient with abnormal behavior, hearing voices, suspiciousness, social withdrawal. Examiner asks diagnosis, differentials, treatment plan, and what to do if non-compliant.

EXPECTED DIAGNOSIS

Schizophrenia spectrum disorder (if ≥6 months with functional decline) or **schizophreniform** (1–6 months).

KEY FEATURES & SPECIAL POINTS

- **Positive**: hallucinations (usually auditory), delusions, disorganized speech/behavior.
- **Negative**: flat affect, alogia, avolition, anhedonia.
- **First-rank symptoms**: thought insertion/withdrawal, running commentary, voices arguing.

INVESTIGATIONS

Rule out organic/substance:

- RBS, TFTs, B12/folate if indicated; urine toxicology.
- Consider CT/MRI brain if atypical onset, focal neuro signs, late onset.

MANAGEMENT (STEPWISE)

Step 1 Safety: suicide/violence risk, consider inpatient admission if high risk.

Step 2 Antipsychotic: start atypical (e.g., risperidone/olanzapine) as per local protocol, monitor metabolic profile.

Step 3 Psychosocial: psychoeducation, CBTp, family intervention, rehabilitation, substance cessation.

Step 4 Non-compliance: consider **long-acting injectable** (depot), simplify regimen, involve family.

Step 5 Treatment resistant: consider **clozapine** with blood monitoring.

COMPLICATIONS

Relapse, self-harm, substance misuse, metabolic syndrome (treatment), social/occupational decline.

Crafted with ❤ Noaman Khan Musakhel

STATION 12 – PSYCHIATRY STATIC

Depression Scenario (Diagnosis + Treatment + Organic Causes)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Patient with low mood, anhedonia, sleep/appetite change. Examiner asks: diagnosis, screening, organic causes, management, suicide risk.

DIAGNOSIS & CRITERIA

Major Depressive Episode if ≥2 weeks of depressed mood/anhedonia + other symptoms with functional impairment.

SYMPTOMS CHECKLIST (SIGECAPS)

Sleep | **I**nterest loss | **G**uilt | **E**nergy | **C**oncentration | **A**ppetite | **P**sychomotor | **S**uicidality

INVESTIGATIONS (ORGANIC CAUSES)

- Hypothyroidism, anemia, B12 deficiency, diabetes, Cushing's, chronic infection, medications (steroids, interferon), substance use.
- Suggested baseline: FBC, TFTs, B12/folate, RBS/HbA1c; others if indicated.

MANAGEMENT (STEPWISE)

Step 1 Risk assess (suicide/self-harm). If high risk: urgent senior review, consider inpatient care.

Step 2 Mild: psychoeducation, sleep hygiene, structured activity, CBT/therapy.

Step 3 Moderate–severe: add SSRI (first-line) + psychotherapy; review side effects and onset delay (2–4 weeks).

Step 4 Resistant/psychotic/catatonia: specialist referral; consider augmentation or **ECT** if urgent.

COMPLICATIONS

Suicide, functional impairment, relapse, substance misuse, poor adherence.

STATION 13 – PAEDIATRICS STATIC

Kwashiorkor Photo (Diagnosis + Management + Complications)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Photo of child with edema and skin/hair changes. Questions: diagnosis, key signs, management steps, complications.

EXPECTED DIAGNOSIS

Kwashiorkor (edematous severe acute malnutrition).

KEY SIGNS (SPOTTERS)

- **Bilateral pitting edema** (most important).
- **Flaky paint dermatosis** (hyperpigmentation + desquamation).
- **Flag sign hair** (discolored bands), sparse hair.
- Hepatomegaly (fatty liver), apathy, infections.

MANAGEMENT (STEPWISE)

Step 1: Stabilize

- Treat/prevent hypoglycemia, hypothermia.
- Treat dehydration carefully (oral/NG; avoid overload).
- Empiric antibiotics (high infection risk).

Step 2: Start feeding

- Start with low-protein, low-sodium starter feed (e.g., F-75), small frequent feeds.
- Correct electrolytes (K, Mg), give vitamins and micronutrients.

Step 3: Rehabilitation

- Transition to catch-up feeds (F-100/RUTF), stimulate play, caregiver education.

Step 4: Follow-up

- Growth monitoring, address underlying social causes, immunizations.

COMPLICATIONS

Sepsis, hypoglycemia, electrolyte imbalance, heart failure (if fluid overload), mortality risk.

STATION 14 – MEDICINE STATIC

Ischemic Stroke (Clinical Diagnosis + Disability Control)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Patient with sudden focal neurological deficit (FAST). Examiner asks diagnosis, investigations, acute management, disability prevention and rehab.

DIAGNOSIS

Acute ischemic stroke until proven otherwise; rule out hemorrhage by CT.

INVESTIGATIONS

CT brain (urgent), ECG for AF, glucose, FBC/U&E/coag, CTA if LVO suspected, swallow assessment.

MANAGEMENT (STEPWISE)

Stabilize → thrombolysis/thrombectomy eligibility → antiplatelets/statin → DVT prophylaxis → rehab + secondary prevention.

DISABILITY CONTROL / REHAB

Early mobilization, physio/OT/speech, treat spasticity, screen depression, caregiver training, prevent aspiration/pressure sores.

STATION 15 – SURGERY STATIC

Per Rectum Bleeding – Causes (Differential)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Examiner asks: common causes of PR bleeding and how you differentiate by history/exam.

DIFFERENTIAL (HIGH-YIELD)

- **Bright red**: hemorrhoids, fissure, proctitis, rectal cancer.
- **Mixed with stool**: colorectal cancer, IBD, polyps.
- **Dark/maroon**: proximal colon, small bowel.
- **Massive painless**: diverticular bleed, angiodysplasia.

WORK-UP

Vitals, DRE/proctoscopy, FBC, coagulation, colonoscopy (stable), CT angiography if ongoing severe bleed.

STATION 16 – SURGERY STATIC

Acute Appendicitis Scoring System

KMU FINAL YEAR MBBS

KEY SCORE

Alvarado Score (MANTRELS):

- **M**igration of pain (1)
- **A**norexia (1)
- **N**ausea/vomiting (1)
- **T**enderness RIF (2)
- **R**ebound/guarding (1)
- **E**levated temperature (1)
- **L**eukocytosis (2)
- **S**hift to left (1)

High score suggests appendicitis; correlate clinically and with imaging.

SPECIAL SIGNS

Rovsing, Psoas, Obturator; McBurney tenderness.

STATION 17 – SURGERY STATIC

Inguinal Hernia Scenario (Diagnosis + Definitive Management)

KMU FINAL YEAR MBBS

DIAGNOSIS & DIFFERENTIALS

- **Indirect inguinal hernia**: through deep ring, may reach scrotum, common in young.
- **Direct**: through Hesselbach triangle, older age, rarely scrotal.
- Differentials: hydrocele, lymphadenopathy, femoral hernia, varicocele.

MANAGEMENT (STEPWISE)

Reduce if uncomplicated and possible; assess for obstruction/strangulation.

- Elective: mesh repair (herniorrhaphy) depending on case.
- Emergency: if strangulated/obstructed → urgent surgery.

COMPLICATIONS

Obstruction, strangulation, recurrence, chronic pain (post-repair).

STATION 18 – PAEDIATRICS STATIC

Necrotizing Enterocolitis (NEC) Scenario

KMU FINAL YEAR MBBS

KEY DIAGNOSIS POINTS

Premature neonate, abdominal distension, feed intolerance, blood in stool. X-ray: **pneumatosis intestinalis** (pathognomonic) ± portal venous gas.

MANAGEMENT (STEPWISE)

NPO + NG decompression → IV fluids/TPN → broad-spectrum antibiotics → serial abdominal exams/X-rays → surgery if perforation/necrosis.

COMPLICATIONS

Perforation, sepsis, strictures, short bowel syndrome.

STATION 19 – MEDICINE STATIC

Celiac Disease – Counseling Station (Exam Instructions)

KMU FINAL YEAR MBBS

WHAT YOU MUST TELL THE PATIENT

- **Explain diagnosis simply**: immune reaction to gluten damages small intestine.
- **Strict gluten-free diet for life**: avoid wheat, barley, rye. Safe: rice, corn, quinoa; only certified gluten-free oats.
- **Check labels**: sauces, processed foods, medications may contain gluten.
- **Correct deficiencies**: iron, folate, B12, vitamin D/calcium.
- **Follow-up**: tTG-IgA trend, growth (children), bone density when appropriate.
- **Family screening** if symptoms or high risk.

COMPLICATIONS (IF NON-ADHERENT)

Malnutrition, anemia, osteoporosis, infertility, lymphoma risk, neuropathy.

STATION 20 – SURGERY STATIC

Spinal Needle / LP Needle (Identification + Uses + Complications)

KMU FINAL YEAR MBBS

WHAT YOU SAY IN THE STATION

- Identify: **Quincke (cutting)** vs **Whitacre/Sprotte (pencil-point)**.
- Uses: spinal anesthesia, diagnostic LP (meningitis, SAH), intrathecal meds.
- Site: L3–4 or L4–5 (iliac crest line = L4).

CONTRAINDICATIONS

Raised ICP/mass lesion, local infection, coagulopathy/low platelets, unstable patient.

COMPLICATIONS

Post-dural puncture headache, bleeding/hematoma, infection, nerve irritation, herniation (if raised ICP).

STATION 21 – MEDICINE STATIC

Viral Meningitis Scenario

KMU FINAL YEAR MBBS

DIAGNOSIS CLUES

Headache, fever, neck stiffness but usually less toxic than bacterial; CSF: lymphocytes, normal glucose, mildly raised protein.

INVESTIGATIONS

LP (after ruling out raised ICP), CSF PCR, FBC/CRP, blood cultures if febrile, consider CT brain if red flags.

MANAGEMENT

Supportive (fluids, analgesia). If HSV encephalitis suspected: start acyclovir urgently.

COMPLICATIONS

Seizures (rare), dehydration, encephalitis if HSV.

STATION 22 – SURGERY STATIC

X-ray – Intestinal Perforation (Free Air)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

Erect chest/abdominal X-ray shows free air under diaphragm. Questions: findings, diagnosis, urgent management, complications.

KEY X-RAY FINDINGS

- **Pneumoperitoneum**: free air under diaphragm (right side easiest).
- Rigler sign (double wall) if large free air on supine film.
- Clinical correlation: sudden severe abdominal pain, rigid abdomen, peritonitis.

MANAGEMENT (STEPWISE)

ABC → NPO → NG decompression → IV fluids → broad-spectrum antibiotics → urgent surgical consult → laparotomy/laparoscopy depending on cause.

COMPLICATIONS

Sepsis, shock, abscess, multi-organ failure.

STATION 23 – PAEDIATRICS STATIC

Diagnosis Spotters: Intussusception, Hirschsprung, Hydrocele

KMU FINAL YEAR MBBS

KEY SPOT DIAGNOSES

- **Intussusception**: colicky pain + vomiting + red currant jelly stool; sausage mass; US “target sign”.
- **Hirschsprung**: delayed meconium, chronic constipation, abdominal distension; rectal exam explosive stool; biopsy shows aganglionosis.
- **Hydrocele**: scrotal swelling, transilluminates, above you can get fingers; differentiate from hernia.

MANAGEMENT (ONE-LINERS)

Intussusception: air/contrast enema reduction; surgery if perforation/failed. Hirschsprung: surgical pull-through. Hydrocele: observe infant; surgery if persistent/communicating.

STATION 24 – SURGERY STATIC

Acute Cholecystitis (Signs + Management + Complications)

KMU FINAL YEAR MBBS

DIAGNOSIS CLUES

RUQ pain, fever, leukocytosis, nausea/vomiting, **Murphy sign**.

INVESTIGATIONS

FBC, LFTs; **US abdomen** (gallstones, wall thickening, pericholecystic fluid). HIDA if uncertain.

MANAGEMENT (STEPWISE)

NPO + IV fluids + analgesia → antibiotics → early laparoscopic cholecystectomy (preferred) or percutaneous cholecystostomy if unfit.

COMPLICATIONS

Empyema, gangrene, perforation, pancreatitis, cholangitis, Mirizzi.

STATION 25 – NEUROLOGY STATIC

Alzheimer Disease

KMU FINAL YEAR MBBS

KEY POINTS

Progressive memory loss + executive dysfunction; screen cognition; rule out reversible causes.

INVESTIGATIONS

FBC, TFTs, B12, electrolytes; MRI/CT to exclude other causes.

MANAGEMENT

Non-pharmacologic support, safety, caregiver support; cholinesterase inhibitors/memantine per stage.

STATION 26 – NEUROLOGY STATIC

Parkinson Disease

KMU FINAL YEAR MBBS

KEY FEATURES

Bradykinesia + rigidity + rest tremor, postural instability. Masked facies, shuffling gait.

MANAGEMENT

Physio/OT, levodopa/carbidopa, dopamine agonists; manage non-motor symptoms.

STATION 27 – NEUROLOGY STATIC

Myasthenia Gravis

KMU FINAL YEAR MBBS

KEY FEATURES

Fluctuating fatigable weakness, ptosis/diplopia, bulbar symptoms. Improves with rest.

INVESTIGATIONS

AChR antibodies, EMG, CT chest for thymoma.

MANAGEMENT

Pyridostigmine, immunosuppression; crisis: ICU, IVIG/plasmapheresis.

Crafted with ❤ Noaman Khan Musakhel

STATION 28 – MEDICINE STATIC

Headache (Approach + Red Flags)

KMU FINAL YEAR MBBS

RED FLAGS

Sudden thunderclap, neuro deficit, fever/meningism, papilledema, immunosuppressed, age >50 new headache, cancer history.

CORE WORK-UP

Vitals, neuro exam, fundoscopy; imaging/LP based on red flags.

Crafted with ❤ Noaman Khan Musakhel

STATION 29 – MEDICINE STATIC

Epilepsy & Status Epilepticus

KMU FINAL YEAR MBBS

STATUS EPILEPTICUS – STEPWISE

- **0–5 min**: ABC, O_2, IV access, glucose.
- **5–20 min**: benzodiazepine (e.g., lorazepam IV, repeat once).
- **20–40 min**: load antiseizure (levetiracetam/phenytoin/valproate per protocol).
- **>40 min**: ICU, intubate, infusion anesthetic (midazolam/propofol), EEG.

COMPLICATIONS

Hypoxia, aspiration, rhabdomyolysis, acidosis, brain injury.

STATION 30 – PSYCHIATRY STATIC

Bipolar Disorder

KMU FINAL YEAR MBBS

KEY POINTS

Mania/hypomania episodes + depression. Treat acute mania and long-term mood stabilization.

STATION 31 – PSYCHIATRY STATIC

PTSD

KMU FINAL YEAR MBBS

KEY FEATURES

Re-experiencing, avoidance, hyperarousal, negative mood/cognition >1 month after trauma.

STATION 32 – MEDICINE STATIC

SLE and RA (Spot Differentiation)

KMU FINAL YEAR MBBS

KEY DIFFERENCES

- **RA**: symmetric small joint inflammatory arthritis, morning stiffness, RF/anti-CCP, erosions.
- **SLE**: multisystem (rash, oral ulcers, cytopenias, nephritis), ANA/anti-dsDNA, low complement.

STATION 33 – PSYCHIATRY STATIC

Acute Stress Disorder

KMU FINAL YEAR MBBS

KEY POINT

Similar to PTSD but duration 3 days to 1 month after trauma.

Crafted with ❤️ Noaman Khan Musakhel

STATION 34 – MEDICINE STATIC

Subarachnoid Hemorrhage (SAH)

KMU FINAL YEAR MBBS

SCENARIO GIVEN

"Worst headache of life" sudden onset. Examiner asks diagnosis, investigations, management, complications.

DIAGNOSIS

SAH (usually aneurysmal) until proven otherwise.

INVESTIGATIONS

- **Non-contrast CT brain** first (best early).
- If CT negative but suspicion high: **LP** for xanthochromia (after appropriate timing/protocol).
- **CTA/MRA** to identify aneurysm.

MANAGEMENT (STEPWISE)

Stabilize → BP control → **nimodipine** (vasospasm prevention) → neurosurgery for coiling/clipping → manage hydrocephalus (EVD if needed).

COMPLICATIONS

Rebleeding, vasospasm (day 3–14), hydrocephalus, hyponatremia, seizures.

STATION 35 – MEDICINE STATIC

Cushing Triad (Raised ICP)

KMU FINAL YEAR MBBS

WHAT IT MEANS

- **Hypertension** (widened pulse pressure)
- **Bradycardia**
- **Irregular respiration**

Late sign of raised ICP and impending herniation.

IMMEDIATE MANAGEMENT (STEPWISE)

Head up 30° → maintain oxygenation and BP → treat cause → hypertonic saline/mannitol as per protocol → urgent neurosurgical review.

Crafted with ❤ Noaman Khan Musakhel

STATION 36 – PAEDIATRICS INTERACTIVE

Pediatric History + EPI Schedule + Lymph Node Examination

KMU FINAL YEAR MBBS

PEDIATRIC HISTORY (STRUCTURE)

Presenting complaint → HOPI → birth history → feeding → development milestones → immunization (EPI) → past illness/admissions → family history → social history.

LYMPH NODES EXAM

Inspect and palpate systematically: pre/post-auricular, occipital, cervical chains, supraclavicular, axillary, epitrochlear, inguinal. Comment on size, tenderness, mobility, matted nodes.

Crafted with ❤ Noaman Khan Musakhel

STATION 37 – PAEDIATRICS STATIC

Child with Tonic-Clonic Seizures / Status Epilepticus

KMU FINAL YEAR MBBS

MANAGEMENT (STEPWISE)

ABC + glucose → benzodiazepine → load anticonvulsant → ICU + intubate if refractory; treat cause (fever, meningitis, electrolytes).

INVESTIGATIONS

RBS, electrolytes, Ca/Mg, infection work-up; LP if meningitis suspected after stabilization.

STATION 38 – NEUROLOGY STATIC

Multiple Sclerosis Scenario

KMU FINAL YEAR MBBS

INVESTIGATIONS

MRI brain/spine (demyelinating lesions), CSF oligoclonal bands, evoked potentials.

MANAGEMENT

Acute relapse steroids, disease-modifying therapy, rehab, symptomatic treatment.

STATION 39 – PSYCHIATRY STATIC

Antidepressants Classification

KMU FINAL YEAR MBBS

CLASSES

SSRIs, SNRIs, TCAs, MAOIs, atypical (mirtazapine, bupropion). Mention overdose risk (TCAs), serotonin syndrome, sexual side effects.

STATION 40 – PSYCHIATRY STATIC

Antipsychotic Classification

KMU FINAL YEAR MBBS

KEY SIDE EFFECTS

EPS, metabolic syndrome, hyperprolactinemia, QT prolongation, NMS. Clozapine: agranulocytosis, myocarditis (monitoring).

STATION 41–44 – PSYCHIATRY STATIC

Definitions: Hallucinations, Delusions, Depression, Anxiety

KMU FINAL YEAR MBBS

DEFINITIONS

Hallucination: perception without stimulus. Delusion: fixed false belief. Depression: persistent low mood/anhedonia. Anxiety: excessive worry + autonomic symptoms.

STATION 45 – SURGERY STATIC

Achalasia

KMU FINAL YEAR MBBS

DIAGNOSIS

Dysphagia to solids and liquids, regurgitation; barium “bird beak”; manometry = gold standard.

MANAGEMENT

Pneumatic dilation, Heller myotomy + fundoplication, POEM; botox if unfit.

STATION 46 – SURGERY STATIC

Dysphagia (Approach)

KMU FINAL YEAR MBBS

KEY APPROACH

Oropharyngeal vs esophageal; solids then liquids (obstructive) vs both (motility). Red flags: weight loss, anemia, progressive.

INVESTIGATIONS

Upper GI endoscopy first for red flags; barium swallow; manometry if motility.

STATION 47 – MEDICINE INTERACTIVE

Focused History: Coffee Ground Vomitus (Upper GI Bleed)

KMU FINAL YEAR MBBS

HISTORY CHECKLIST

Onset, amount, melena, dizziness/syncope, NSAIDs/aspirin, anticoagulants, liver disease/alcohol, prior ulcers, weight loss, chest pain, vomiting, pregnancy.

IMMEDIATE MANAGEMENT (WHAT YOU MUST SAY)

ABC + IV access, resuscitate, crossmatch, PPI infusion, urgent endoscopy if unstable, treat cause.

STATION 48 – NEUROLOGY INTERACTIVE

Cranial Nerves V, VII, and X Examination

KMU FINAL YEAR MBBS

CN V (TRIGEMINAL)

Motor (mastication), sensory (V1–V3), corneal reflex (afferent V1), jaw jerk.

CN VII (FACIAL)

Raise eyebrows, close eyes, smile, puff cheeks. UMN: forehead spared; LMN: whole face.

CN X (VAGUS)

Say “Ahh” palatal rise, uvula deviation, gag reflex, voice quality.

STATION 49 – SURGERY STATIC

Lumbar Puncture Needle: Sites + Indications + Contraindications

KMU FINAL YEAR MBBS

KEY POINTS

Sites: L3–4 / L4–5. Indications: meningitis, SAH (if CT negative), demyelinating work-up. C/I: raised ICP, coagulopathy, local infection.

STATION 50 – MEDICINE STATIC

Liver Cirrhosis – Counseling Station (Exam Instructions)

KMU FINAL YEAR MBBS

WHAT YOU MUST TELL THE PATIENT

- **Stop alcohol completely** (most important).
- Low-salt diet if ascites; adequate protein unless encephalopathy severe.
- Avoid NSAIDs and hepatotoxic meds; avoid raw seafood.
- Vaccines: Hep A/B, flu, pneumococcal.
- Surveillance: US + AFP every 6 months; endoscopy for varices.
- Red flags: GI bleed, confusion, fever, increasing abdomen.

COMPLICATIONS TO MENTION

Variceal bleed, ascites/SBP, encephalopathy, HRS, HCC.

Crafted with ❤ Noaman Khan Musakhel

STATION 51 – NEUROLOGY STATIC

Hydrocephalus Scenario (Types + Dx + Management)

KMU FINAL YEAR MBBS

KEY TYPES

Obstructive vs communicating. NPH triad: gait disturbance, dementia, urinary incontinence.

MANAGEMENT

Treat cause; EVD for acute; VP shunt for long-term; NPH: tap test then shunt.

Crafted with ❤ Noaman Khan Musakhel

STATION 52 – PAEDIATRICS STATIC

Cellulitis / Carbuncle Scenario

KMU FINAL YEAR MBBS

KEY POINTS

Cellulitis: diffuse erythema, warmth, tenderness. Carbuncle: multiple draining points. Consider MRSA risk.

MANAGEMENT

Antibiotics, analgesia; incision & drainage if abscess; monitor sepsis signs.

STATION 53 – PAEDIATRICS STATIC

Omphalocele (Types + Embryology + Management)

KMU FINAL YEAR MBBS

KEY FACTS

Midline defect with sac (amnion + Wharton jelly + peritoneum). Associated anomalies common (trisomies, cardiac).

MANAGEMENT

Protect sac, NPO, IV fluids, antibiotics; staged vs primary closure; genetic evaluation.

STATION 54 – PSYCHIATRY STATIC

Psychomotor Treatment: ECT

KMU FINAL YEAR MBBS

INDICATIONS

Severe depression with suicidality/psychosis, catatonia, severe mania, treatment resistant depression.

COMPLICATIONS

Headache, myalgia, transient memory impairment; rare prolonged seizure/arrhythmia.

Crafted with ❤️ Noaman Khan Musakhel