



LUMA EDUCATIONAL APPS

CCRN Adult Review Course

Ultimate CCRN exam prep with practice questions

2026 Edition | AACN Adult Direct Care Pathway
Clinical Review · 310 Practice Questions · Full Rationales

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Educational resource for critical care nursing certification

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This course follows the AACN Adult CCRN Direct Care pathway content outline. Use the clinical review modules first, then complete the practice set before checking answers.

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COURSE INTRODUCTION

Welcome to Your CCRN Review

Welcome

Welcome to Luma Educational Apps. Congratulations on taking the first step toward preparing for the CCRN exam. Whether you are beginning your review, returning to critical care concepts after time away, or looking for a focused and supportive way to strengthen your knowledge, this guide was created to help you move forward with confidence.

Luma Educational Apps was built with a deep respect for the work of critical care nurses and the dedication it takes to pursue certification. The company is owned by a Certified Registered Nurse Anesthetist with more than 16 years of clinical experience as a CRNA, along with extensive training and hands-on experience in critical care. That background shapes the way this course approaches learning: with practical insight, clear explanations, and an understanding of what high-acuity care demands at the bedside.

This first lesson is your starting point. The goal is not only to help you prepare for an exam, but also to reinforce the clinical thinking, prioritization, and confidence that are essential in critical care practice. At Luma Educational Apps, we believe that strong preparation should feel organized, approachable, and connected to real clinical practice.

I have combed through the AACN Certification Exam Policy Handbook so you don't have to. There are multiple certifications the AACN offers but for this specific review guide, we will be focusing on CCRN (Adult) Direct Care Certification Eligibility Pathway. As you begin this guide, know that you are supported by education created from experience, purpose, and a commitment to helping critical care professionals succeed.

Welcome to Luma Educational Apps—we are honored to be part of your CCRN journey.

Why Take the CCRN Exam

Taking the CCRN exam is more than earning another credential—it is a powerful way to recognize the advanced knowledge, clinical judgment, and dedication required to care for acutely and critically ill patients. The CCRN certification demonstrates that you have built a strong foundation in critical care nursing and are committed to maintaining excellence in a high-acuity environment. For many nurses, preparing for the CCRN exam also strengthens confidence at the bedside.

The review process encourages you to revisit core systems, connect pathophysiology to patient presentation, and sharpen your ability to anticipate complications, prioritize interventions, and make sound clinical decisions. Even before exam day, the preparation itself can help you become a stronger and more thoughtful critical care nurse. CCRN certification can also support your professional growth.

It is a respected specialty credential that helps communicate your expertise to employers, colleagues, patients, and families. It may strengthen your resume, support advancement into leadership or specialty roles, and show that you are invested in ongoing learning and professional excellence. If your long-term goal is to apply to CRNA school, earning your CCRN can also help strengthen your application.

While requirements vary by program, CCRN certification shows admissions committees that you have gone beyond the minimum expectations for critical care experience. It reflects initiative, discipline, strong foundational knowledge, and a serious commitment to advanced practice. For aspiring CRNAs, the CCRN can help demonstrate that you are actively preparing for the academic and clinical rigor of nurse anesthesia training.

Most importantly, choosing to take the CCRN exam is a personal statement. It says that the work you do matters, the knowledge you carry is valuable, and the patients you serve deserve highly prepared nurses at the bedside. Pursuing CCRN certification is a meaningful step toward honoring your experience, challenging yourself, and continuing to grow in the critical care profession.

Benefits After Passing the CCRN Exam

Passing the CCRN exam is a major professional accomplishment. It represents the time, discipline, and clinical growth you invested throughout your preparation. Once you earn the CCRN credential, you can carry it as a visible reflection of your advanced critical care knowledge and your commitment to caring for high-acuity patients with confidence and excellence.

One of the most meaningful benefits is the confidence that comes from knowing you met a nationally recognized standard in critical care nursing. The process of preparing for and passing the exam reinforces your ability to connect pathophysiology, assessment findings, hemodynamics, medications, labs, and interventions in a more organized and clinically useful way. The CCRN credential may also strengthen your professional reputation.

It can help demonstrate your expertise to nurse leaders, interdisciplinary team members, patients, and families. In many clinical environments, certification is viewed as a sign of dedication, accountability, and professional pride. It may also support opportunities for advancement, precepting, charge nurse roles, committee involvement, specialty teams, or leadership development.

For nurses planning to apply to CRNA school, passing the CCRN exam can be especially valuable. While each nurse anesthesia program has its own admissions criteria, having the CCRN credential may help show that you have taken initiative to validate your critical care knowledge and prepare yourself for advanced practice education. It can strengthen your application by highlighting discipline, academic readiness, and a serious commitment to the path toward nurse anesthesia.

Beyond career benefits, passing the CCRN exam is personally rewarding. It is proof that you challenged yourself, followed through, and achieved something meaningful in a demanding specialty. The credential does not replace bedside experience, but it adds to it by recognizing the knowledge and judgment that critical care nurses use every day.

After passing, you can move forward with a stronger sense of confidence, credibility, and pride in the work you do.

EXAM FOUNDATIONS

Course Overview and Exam Blueprint

Course Overview

CCRN Review – Module Map

- Module 1: AACN Exam Blueprint & Exam Strategy
- Module 2: Cardiovascular System (13%)
- Module 3: Respiratory System (12%)
- Module 4: Endocrine, Hematology/Immunology, GI, Renal/GU, Integumentary (21%)
- Module 5: Musculoskeletal, Neurological, Behavioral/Psychosocial (18%)
- Module 6: Multisystem Disorders (16%)
- Module 7: Professional Caring & Ethical Practice – Synergy Model (20%)
- Module 8: Evidence-Based Interventions & Critical Care Protocols
- Module 9: Hemodynamic Monitoring & Mechanical Ventilation
- Module 10: Pharmacology in Critical Care
- Module 11: Practice Exam – 300+ Questions with Answer Key

CCRN Exam Overview

Format & Structure

- 150 total questions (125 scored + 25 unscored pretest items)
- 3-hour time limit

All multiple-choice format

- Computer-based at authorized testing centers or remote proctoring
- Passing: scaled score of 89 on 0-99 scale (~70% raw, 87/125 correct)

Eligibility – Direct Care Pathway

Current RN licensure

- 1,750 hours direct care of acutely/critically ill patients within past 2 years
- 875 of those hours within the most recent 12-month period

CLINICAL JUDGMENT

- 80%
- 100 scored questions

PROFESSIONAL CARING & ETHICAL PRACTICE

- 20%
- 25 scored questions

AACN Adult CCRN Exam Blueprint

Domain	Subtopics (Sample)	% Exam	~Qs
Cardiovascular	ACS, heart failure, dysrhythmias, cardiogenic shock, cardiac surgery, tamponade, aortic disorders, vascular interventions	13%	~16
Respiratory	ARDS, mechanical ventilation, PE, pneumothorax, status asthmaticus, thoracic trauma, pulmonary HTN, respiratory failure	12%	~15

Endo/Heme/Immuno/GI/Renal/GU/Integumentary	DKA, HHS, DIC, HIT, AKI, hepatic failure, GI bleed, pancreatitis, burns (partial)	21%	~26
MSK/Neurological/Behavioral-Psychosocial	Stroke, ICP, TBI, SCI, seizures, anxiety, delirium, substance use, suicidal ideation	18%	~23
Multisystem	Sepsis, MODS, shock, acid-base, fluid/electrolytes, burns, infectious disease, palliative/end-of-life	16%	~20
Clinical Judgment TOTAL		80%	~100
Advocacy/Moral Agency	Patient rights, surrogate decision-making, moral distress, end-of-life advocacy	3%	~4
Caring Practices	Comfort, family-centered care, skin integrity, restraint alternatives, individualized care	4%	~5
Collaboration	Interdisciplinary teamwork, conflict resolution, family meetings, consultations	4%	~5
Systems Thinking	Resource allocation, healthcare environment, quality improvement, safety culture	2%	~3
Response to Diversity	Cultural competence, health equity, literacy, individualized practice	2%	~3
Clinical Inquiry	Evidence-based practice, research utilization, questioning practices	2%	~3
Facilitation of Learning	Patient/family education, staff teaching, health literacy	3%	~4
Professional Caring TOTAL		20%	~25

- Effective November 12, 2025 - Direct Care Pathway

MODULE 1

AACN Exam Blueprint and Test-Taking Strategy

Test-Taking Strategy

Maximizing Your Score on Exam Day

The NCLEX-Style Critical Thinking Approach

- Read the stem first - identify what is being asked (assessment, intervention, priority?)
- Use the ABCs (Airway, Breathing, Circulation) to prioritize
- Apply Maslow's Hierarchy: physiologic needs first

Eliminate "always/never" absolute answers

- When two answers seem correct - choose the one that addresses the cause vs. symptoms
- Assess BEFORE you intervene (unless life-threatening)

Time Management

- 150 questions in 180 minutes = 1.2 minutes per question
- Flag difficult questions - return after completing the exam
- Don't change answers unless you have a clear, logical reason

Your first instinct is often correct

High-Yield Study Priorities

- Cardiovascular (13%) - hemodynamics, ACS, shock
- Respiratory (12%) - ventilator management, ARDS, ABGs
- Multisystem (16%) - sepsis bundles, MODS, acid-base
- Neuro/MSK/Behavioral (18%) - stroke, ICP, delirium

Know normal hemodynamic values cold

Know drug mechanisms, antidotes, and toxicities

- Synergy Model - know all 8 nurse competencies
- Practice at least 500 questions before exam day

MODULE 2

Cardiovascular System

Acute Coronary Syndrome & Heart Failure

Cardiovascular – High-Yield Content

- ACS: STEMI/NSTEMI/UA
- STEMI: ST elevation ≥ 1 mm in 2+ contiguous leads; door-to-balloon ≤ 90 min
- NSTEMI: elevated troponin + ST depression/T-wave changes, NO elevation
- Treatment: aspirin, heparin, nitrates, beta-blockers, PCI or thrombolytics
- Killip classification guides prognosis and management
- Post-MI complications: VF, complete heart block, VSD, papillary rupture

Heart Failure

- Systolic (HFrEF): EF $< 40\%$ - ACE inhibitors, beta-blockers, diuretics
- Diastolic (HFpEF): normal EF, impaired relaxation - rate control, diuresis
- Acute decompensation: pulmonary edema, JVD, S3 gallop, crackles
- PCWP > 18 mmHg = cardiogenic pulmonary edema
- Inotropes: dobutamine (preferred), milrinone; vasopressors if hypotensive

Hemodynamic Values – Normal Ranges

- CO: 4-8 L/min
- CI: 2.4-4.0 L/min/m
- CVP: 2-8 mmHg
- PAP: 15-25/8-15 mmHg
- PCWP/PAOP: 6-12 mmHg
- SVR: 800-1200 dynes/sec/cm⁵
- SvO₂: 60-80%
- MAP: 70-100 mmHg

Shock Patterns (PA Catheter)

- Cardiogenic: up PCWP, down CO, up SVR
- Distributive (septic): down SVR, up CO, down /nl PCWP
- Hypovolemic: down PCWP, down CO, up SVR
- Obstructive (tamponade/PE): up CVP, down CO

Dysrhythmias, Cardiac Surgery & Tamponade

Cardiovascular – High-Yield Content

Dysrhythmias

- VF/Pulseless VT: defibrillation (unsynchronized), CPR, epinephrine 1 mg
- VT with pulse: amiodarone 150 mg IV; synchronized cardioversion if unstable
- Torsades de Pointes: magnesium 2g IV; stop offending drugs (QT-prolonging)
- SVT: vagal maneuver -> adenosine 6 mg rapid IV push -> 12 mg
- A-fib: rate control (diltiazem, metoprolol); anticoagulation for > 48 hr
- 3rd-degree heart block: transcutaneous pacing; atropine as bridge
- WPW (Wolff-Parkinson-White): AVOID adenosine, AV nodal blockers

Cardiac Tamponade

- Beck's Triad: hypotension, muffled heart sounds, JVD

- Pulsus paradoxus: >10 mmHg drop in SBP with inspiration
- Treatment: emergent pericardiocentesis; avoid positive pressure if possible

Post-Cardiac Surgery Care

- Monitor for low CO: CI <2.2 = cardiogenic shock
- Chest tube output >200 mL/hr x 2 hrs = concern for hemorrhage
- Post-CABG A-fib: common (30%); treat with amiodarone
- IABP (intra-aortic balloon pump): inflates in diastole, deflates at systole
- IABP contraindicated: aortic regurgitation, aortic dissection

Aortic Aneurysm / Dissection

- Type A (ascending): surgical emergency
- Type B (descending): medical management - BP control (SBP 100-120 mmHg)
- "Tearing" or "ripping" chest pain radiating to back - classic presentation

Pulse deficits, unequal BPs in arms**AVOID anticoagulation in Type A**

MODULE 3

Respiratory System

ARDS & Mechanical Ventilation

Respiratory – High-Yield Content

ARDS – Berlin Criteria

- Onset within 1 week of known insult or new/worsening symptoms

Bilateral opacities on CXR or CT

- Not explained by cardiac failure or fluid overload
- Mild: PaO₂/FiO₂ 200-300; Moderate: 100-200; Severe: <100
- Management: LPV (6 mL/kg IBW), PEEP titration, prone positioning ≥16 hrs
- Plateau pressure goal ≤30 cmH₂O

ABG Interpretation (Tic-Tac-Toe Method)

- pH 7.35-7.45 (acidosis <7.35; alkalosis >7.45)
- PaCO₂ 35-45 (respiratory); HCO₃ 22-26 (metabolic)
- Resp. Acidosis: up CO₂, down pH (hypoventilation, COPD, sedation)
- Resp. Alkalosis: down CO₂, up pH (hyperventilation, anxiety, PE)
- Met. Acidosis: down HCO₃, down pH (DKA, lactic acidosis, renal failure)
- Met. Alkalosis: up HCO₃, up pH (vomiting, NG suction, diuretics)

Mechanical Ventilation Modes

- AC/VC (Assist Control/Volume): guaranteed TV; all breaths machine-supported
- SIMV: set rate of machine breaths; patient can breathe between
- Pressure Support (PS): patient-triggered; augments spontaneous effort
- PRVC: pressure-regulated volume control - combines both

Weaning Criteria (RSBI)

- RSBI = RR TV(L); <105 = ready to wean
- Spontaneous Breathing Trial (SBT): 30 min on CPAP/PS ≤5
- SAT (daily sedation interruption) + SBT = improved outcomes

Vent Complications

- VAP: HOB 30-45 degrees, oral care, cuff pressure checks, hand hygiene
- Pneumothorax: absent breath sounds, tracheal deviation → tension
- Barotrauma: peak pressure >40 cmH₂O, up plateau, up auto-PEEP

Pulmonary Embolism, HTN & Status Asthmaticus

Respiratory – High-Yield Content

Pulmonary Embolism (PE)

- S1Q3T3 pattern on ECG; sudden dyspnea, pleuritic CP, hemoptysis
- Massive PE: hemodynamic instability → thrombolytics (tPA) or embolectomy
- Submassive: anticoagulation (heparin → warfarin/DOAC)
- Wells Score: DVT sx, no alt dx, HR >100, immobilization, prior DVT/PE, hemoptysis, malignancy
- D-dimer: sensitive, NOT specific; useful to rule OUT

Status Asthmaticus

- Life-threatening asthma unresponsive to initial bronchodilators

- Silent chest = ominous sign (no air movement)
- Tx: O₂, SABA nebs, IV corticosteroids, heliox, magnesium sulfate 2g IV
- Rising PaCO₂ in asthmatic = respiratory fatigue - prepare to intubate
- Intubation: ketamine preferred (bronchodilator); permissive hypercapnia

Pulmonary Hypertension

- mPAP >25 mmHg at rest
- RV failure: JVD, peripheral edema, hepatomegaly, RV heave
- Tx: inhaled nitric oxide, prostacyclins (epoprostenol), sildenafil, endothelin antagonists
- AVOID hypoxia, hypercapnia, acidosis (all worsen PVR)

Pneumothorax / Hemothorax

- Tension pneumothorax: tracheal deviation AWAY from affected side
- Emergency: needle decompression 2nd ICS midclavicular line
- Hemothorax: chest tube (large bore); >1500 mL = surgical thoracotomy

COPD Exacerbation

- Target O₂ sat 88-92% (avoid hypoxic drive suppression)
- NIV (BiPAP): first-line for COPD exacerbation with hypercapnia
- SABA + SAMA nebs, systemic steroids, antibiotics (if bacterial)

MODULE 4

Endocrine, Hematology/Immunology, GI, Renal/GU, and Integumentary

Endocrine Emergencies

- DKA, HHS, Thyroid Storm, Adrenal Crisis, DI vs SIADH

DKA vs HHS

- DKA: glucose >250, pH <7.3, bicarb <18, anion gap >12, KETONES
- HHS: glucose >600, pH normal, bicarb normal, NO significant ketones, extreme hyperosmolarity
- Both: fluid resuscitation (NS 0.9%), then insulin drip (DKA: wait until K+ >=3.5)
- Add dextrose when glucose <250 (DKA) or <300 (HHS)

SIADH vs Diabetes Insipidus

- SIADH: hyponatremia, concentrated urine (UOsm >100), low serum osm
- SIADH Tx: fluid restriction, hypertonic saline (severe sx), vasopressin antagonists
- DI: hypernatremia, dilute urine (UOsm <300), high serum osm
- DI Tx: free water replacement, desmopressin (DDAVP) for central DI

Thyroid Storm & Myxedema Coma

- Thyroid Storm: high fever, tachycardia, altered mental status - PTU + beta-blocker + iodine + steroids
- Myxedema: hypothermia, bradycardia, altered mentation - IV levothyroxine + steroids

Adrenal Crisis

- Precipitated by stress in known Addison's disease or prolonged steroid use
- Hypotension unresponsive to fluids/pressors, hyponatremia, hyperkalemia, hypoglycemia
- Treatment: IV hydrocortisone 100 mg STAT, aggressive IV fluid resuscitation

Critical Illness Hyperglycemia

- Target glucose 140-180 mg/dL in ICU (NICE-SUGAR trial)
- Insulin infusion for sustained hyperglycemia in critically ill
- Tight glucose control (80-110) associated with increased hypoglycemia and mortality

Electrolyte Emergencies

- Hyperkalemia: peaked T-waves -> widened QRS -> sine wave -> VF
- Tx: calcium gluconate (membrane stabilize), insulin + D50, sodium bicarb, kayexalate, dialysis
- Hypokalemia: U-waves, PVCs, muscle weakness
- Hypomagnesemia: worsens refractory hypokalemia; treat first

Hematology & Coagulation Emergencies

- DIC, HIT, Transfusion Reactions, Oncologic Emergencies

DIC (Disseminated Intravascular Coagulation)

- Simultaneous clotting AND bleeding - consumption coagulopathy
- Labs: up PT/PTT, down fibrinogen, up D-dimer, thrombocytopenia, schistocytes on smear
- Triggers: sepsis, trauma, obstetric complications, malignancy, transfusions
- Treatment: treat underlying cause; FFP, cryoprecipitate, platelets

HIT (Heparin-Induced Thrombocytopenia)

- 4T Score: Thrombocytopenia, Timing, Thrombosis, oTher cause
- Platelet drop >50% 5-14 days after heparin exposure

- STOP ALL HEPARIN - switch to direct thrombin inhibitor (argatroban, bivalirudin)
- Do NOT give platelets (risks thrombotic storm)

Transfusion Reactions

- TRALI: non-cardiogenic pulmonary edema within 6 hrs of transfusion; bilateral infiltrates, no fluid overload
- TACO: fluid overload pattern - JVD, up BNP, bilateral crackles, HTN
- Acute Hemolytic: ABO incompatibility - STOP transfusion, NS flush, notify blood bank
- Anaphylaxis: IgA deficiency - epinephrine, stop transfusion, airway mgmt

Oncologic Emergencies

- TLS (Tumor Lysis Syndrome): up K, up PO, up uric acid, down Ca -> AKI, arrhythmias
- TLS Tx: aggressive IV fluids, allopurinol, rasburicase, ECG monitoring
- SVC Syndrome: facial edema, arm swelling, dilated neck veins - radiation/stent
- Spinal Cord Compression: back pain + motor weakness -> MRI -> dexamethasone + radiation

Renal - AKI (KDIGO Staging)

- Stage 1: Cr x1.5-1.9 or up 0.3 mg/dL; UO <0.5 mL/kg/h x6-12 hr
- Stage 2: Cr x2-2.9; UO <0.5 mL/kg/h x12 hr
- Stage 3: Cr x3 or >=4 mg/dL or RRT; UO <0.3 mL/kg/h x24 hr or anuria x12 hr
- CRRT vs IHD: use AEIOU (Acidosis, Electrolytes, Ingestion, Overload, Uremia)
- CRRT preferred in hemodynamically unstable patients

GI Emergencies

- GI Hemorrhage, Hepatic Failure, Pancreatitis, Bowel Obstruction

GI Hemorrhage

- Upper GIB: hematemesis, melena - EGD within 24 hrs; PPI infusion
- Lower GIB: hematochezia - colonoscopy vs angiography vs surgery
- Variceal bleed: octreotide + EV banding; Sengstaken-Blakemore as bridge

TIPS for refractory esophageal varices

Hepatic Failure / Encephalopathy

- Causes: acetaminophen OD, alcohol, viral hepatitis, autoimmune
- Hepatic encephalopathy: ammonia elevation - lactulose (goal 2-4 BMs/day), rifaximin
- Coagulopathy: PT/INR elevated; give FFP/Vit K ONLY if active bleeding
- Acetaminophen overdose antidote: N-acetylcysteine (NAC)

Acute Pancreatitis

- Cullen's sign (periumbilical bruising) and Grey Turner's sign (flank bruising) = hemorrhagic pancreatitis
- Ranson's criteria predicts severity; Lipase >3x normal most sensitive
- Treatment: NPO, aggressive IV fluids, analgesia, early enteral nutrition

Abdominal Compartment Syndrome

- Intra-abdominal pressure (IAP) >12 mmHg (normal <10)
- ACS: IAP >20 mmHg + new organ failure
- Measure via bladder catheter; HOB <30 degrees ; decompressive laparotomy if refractory

Integumentary - Burns

- Rule of Nines: head 9%, each arm 9%, each leg 18%, trunk (ant/post) 18% each
- Parkland formula: 4 mL x kg x %TBSA burned (give in first 8 hrs)
- Circumferential burns: escharotomy to restore perfusion
- Inhalation injury: hoarseness, stridor -> early intubation

- Monitor UO 0.5-1 mL/kg/hr in burn resuscitation

Pressure Injury Prevention

- Braden Scale: <18 = at risk; <9 = very high risk
- Turn q2h, specialty mattresses, moisture barriers, nutritional support

MODULE 5

Musculoskeletal, Neurological, and Behavioral/Psychosocial

Stroke, Increased ICP & TBI

Neurological – High-Yield Content

Ischemic Stroke

- tPA eligibility: onset <3 hrs (select patients up to 4.5 hrs), no hemorrhage on CT, no major surgery <14 days
- BP management: keep <185/110 BEFORE tPA; allow permissive HTN up to 220 if no tPA
- Mechanical thrombectomy: large vessel occlusion, up to 24 hrs from onset (DAWN criteria)
- FAST: Face drooping, Arm weakness, Speech difficulty, Time to call 911

Hemorrhagic Stroke / Increased ICP

- ICP >20 mmHg = intracranial hypertension; normal 0-15 mmHg
- CPP = MAP - ICP; target CPP 60-70 mmHg
- Cushing's Triad (late sign): HTN + bradycardia + irregular respirations
- ICP management: HOB 30 degrees, normocapnia (PaCO₂ 35-40), euvolemia, osmotherapy
- Mannitol: 0.25-1 g/kg IV bolus; monitor serum osm (goal <320)
- Hypertonic saline (3%): alternative to mannitol; good if hypotensive
- Cerebral herniation: unilateral/bilateral dilated pupils, posturing (decerebrate worst)

Glasgow Coma Scale (GCS)

- Eyes: 4=spontaneous, 3=voice, 2=pain, 1=none
- Verbal: 5=oriented, 4=confused, 3=words, 2=sounds, 1=none
- Motor: 6=obeys, 5=localizes, 4=withdraws, 3=flexion, 2=extension, 1=none
- Severe TBI: GCS ≤8; intubate/ICP monitor

Status Epilepticus

- >5 min continuous OR 2+ seizures without recovery
- Step 1: Lorazepam 0.1 mg/kg IV (or diazepam/midazolam)
- Step 2: Fosphenytoin or levetiracetam or valproate
- Step 3 (refractory): propofol or midazolam infusion + intubation

Spinal Cord Injury

- Neurogenic shock: hypotension + bradycardia (loss of sympathetic tone)
- Spinal shock: flaccid paralysis, areflexia below level; resolves when bulbocavernosus reflex returns
- Autonomic dysreflexia (T6+): severe HTN, bradycardia - remove stimulus, sit upright

Delirium, Behavioral & Psychosocial Issues

Critical Care Neurological – ABCDEF Bundle

ICU Delirium

- CAM-ICU: Confusion Assessment Method for ICU - assesses feature 1-4
- Features: (1) Acute onset/fluctuating, (2) Inattention, (3) Disorganized thinking, (4) Altered LOC
- Hyperactive: agitation, pulling at lines; Hypoactive: somnolence (worse prognosis)
- Non-pharm: reorientation, sleep hygiene, mobility, early family involvement
- Haloperidol for agitation (low QTc risk); avoid antipsychotics for benzodiazepine withdrawal

ABCDEF Bundle (ICU Liberation)

- A: Assess, Prevent, Manage Pain (CPOT/NRS scales)

- B: Both SAT and SBT (spontaneous awakening + breathing trials)
- C: Choice of analgesia and sedation (analgesia first; RASS target)
- D: Delirium assess and manage
- E: Early mobility and Exercise
- F: Family engagement and empowerment

Substance Use Disorder in ICU

- Alcohol withdrawal: CIWA protocol; benzodiazepines (lorazepam, diazepam)
- DTs (delirium tremens): 48-96 hrs after last drink; seizures, autonomic instability
- Wernicke's encephalopathy: thiamine BEFORE glucose (prevent Korsakoff)
- Opioid overdose: naloxone 0.4-2 mg IV/IM; repeat q2-3 min
- Benzo withdrawal: similar to alcohol - benzodiazepines, phenobarbital

Anxiety, PTSD & Depression in ICU

- ICU-acquired PTSD: flashbacks, nightmares - ICU diaries shown to reduce PTSD
- Post-ICU syndrome (PICS): cognitive, psychological, and physical impairments after ICU
- Suicide risk: screen ALL ICU patients, esp. post-OD admissions; 1:1 monitoring
- Self-harm and suicidal ideation - document, remove ligature risks, psychiatry consult

MODULE 6

Multisystem Disorders

Sepsis, Septic Shock & MODS

Multisystem – High-Yield Content

- Sepsis - 2016 Definitions (Sepsis-3)
- Sepsis: life-threatening organ dysfunction (SOFA ≥ 2) from infection
- Septic Shock: vasopressor to maintain MAP ≥ 65 + lactate > 2 mmol/L despite adequate fluids
- qSOFA: RR ≥ 22 , altered mentation, SBP ≤ 100 (2+ = sepsis suspect outside ICU)
- Surviving Sepsis Hour-1 Bundle
- Measure lactate - repeat if > 2 mmol/L
- Blood cultures x2 BEFORE antibiotics
- Broad-spectrum antibiotics within 1 hr of septic shock recognition
- 30 mL/kg IV crystalloid for hypotension or lactate ≥ 4 mmol/L
- Vasopressors if no response to fluids - norepinephrine first-line; MAP ≥ 65

MODS (Multi-Organ Dysfunction Syndrome)

- Sequential organ failure - lung -> kidney -> liver -> GI -> CNS -> cardiovascular

Marshall MODS score tracks progression

- No specific treatment - supportive care for each organ; treat underlying cause

Shock States Summary

- Hypovolemic: hemorrhage/dehydration -> fluids, PRBCs, control source
- Distributive (septic/anaphylactic/neurogenic): down SVR -> vasopressors
- Cardiogenic: pump failure -> inotropes, IABP, consider ECMO
- Obstructive (PE, tamponade, tension PTX): relieve obstruction urgently
- Anaphylaxis: epinephrine 0.3 mg IM (thigh) FIRST - before everything

Toxic Ingestions & Overdose

- TCAs (tricyclics): wide QRS, hypotension -> sodium bicarb
- Beta-blocker OD: glucagon + high-dose insulin + lipid emulsion
- Calcium channel blocker OD: calcium chloride + insulin + vasopressors
- Organophosphate: SLUDGE syndrome - atropine + pralidoxime
- Carbon monoxide: 100% O₂; HBO if severe/pregnant
- Acetaminophen: NAC; salicylates: bicarb + hemodialysis

Palliative Care, Pain Management & Fluid/Electrolytes

Multisystem – High-Yield Content

Palliative & End-of-Life Care

- Palliative care: symptom management and quality of life - ANY stage of illness
- Hospice: comfort-focused; prognosis < 6 months
- Advance directives: Living will, DPOA for healthcare, POLST/MOLST
- Withdrawal of life support: ethical - not equivalent to euthanasia
- Opioids for dyspnea/pain at end of life: legally and ethically appropriate

Pain Assessment in ICU

- NRS (0-10): for verbal/cognitive patients

- CPOT: non-verbal/intubated patients (facial expression, body movement, muscle tension, vent compliance)
- BPS (Behavioral Pain Scale): similar to CPOT for non-verbal
- Analgesia-first (analgo-sedation) approach: treat pain before sedation
- RASS sedation goal: -1 to 0 (calm/cooperative) unless medically indicated deeper

Fluid & Electrolyte Imbalances

- Hyponatremia: correct no faster than 6-8 mEq/L per day (prevent osmotic demyelination)
- Hypernatremia: correct slowly; D5W or hypotonic saline
- Hypocalcemia: prolonged QT, Chvostek's, Trousseau's signs -> IV calcium gluconate
- Hypophosphatemia: respiratory muscle weakness; replace carefully
- Acid-base: ROME mnemonic - Respiratory Opposite, Metabolic Equal

Healthcare-Associated Infections

- CLABSI prevention: maximal barrier precautions, daily necessity review, CHG scrub
- VAP prevention: ABCDEF bundle, HOB 30-45 degrees, oral care with CHG, cuff pressure
- CAUTI: remove catheter ASAP, indication-based insertion, perineal care
- CDI (C. diff): contact precautions, soap+water handwashing, vancomycin PO or fidaxomicin

MODULE 7

Professional Caring and Ethical Practice (Synergy Model)

AACN Synergy Model for Patient Care

- Conceptual Framework for Professional Caring & Ethical Practice

Core Premise

- The Synergy Model holds that PATIENT needs and characteristics should drive nurse competencies. When patient characteristics and nurse competencies SYNERGIZE, optimal outcomes occur.

Eight Patient Characteristics

- 1. Resiliency - ability to return to baseline after illness
- 2. Vulnerability - susceptibility to actual/potential stressors
- 3. Stability - ability to maintain steady state
- 4. Complexity - entanglement of systems/family/therapy
- 5. Predictability - expected care course and outcomes
- 6. Resource Availability - financial, personal, psychological, social
- 7. Participation in Care - involvement in own care decisions
- 8. Participation in Decision-Making - ability to engage in decisions
- Eight Nurse Competencies (20% of Exam)
- 1. Clinical Judgment - reasoning, decision-making, nursing judgment
- 2. Advocacy/Moral Agency - advocate for patient, support surrogate decisions, address moral distress
- 3. Caring Practices - individualized, holistic care; comfort; family-centered
- 4. Collaboration - interdisciplinary teamwork; conflict resolution; family meetings
- 5. Systems Thinking - understand the healthcare environment; resource allocation
- 6. Response to Diversity - cultural humility; individualize care to gender, age, values, lifestyle
- 7. Facilitation of Learning - patient/family teaching; staff education; health literacy
- 8. Clinical Inquiry - evidence-based practice; questioning norms; research utilization

Levels of Practice

- Each competency exists on a continuum: Level 1 (novice) -> Level 3 (expert)

Advocacy, Moral Agency & Caring Practices

- Professional Caring & Ethical Practice - Synergy Model
- Advocacy / Moral Agency (3%)
- Advocate for patient rights: informed consent, autonomy, privacy (HIPAA)
- Moral distress: when nurse knows right action but cannot perform it due to institutional constraints
- Ethics consultation: appropriate when conflict exists about goals of care
- Surrogate decision-makers: follow patient's previously expressed wishes (substituted judgment)
- Veracity: truth-telling; beneficence: do good; non-maleficence: avoid harm; justice: fairness
- Caring Practices (4%)
- Individualized, relationship-based care - "patient-centered"
- Comfort care: pain management, positioning, environment, sleep
- Skin integrity: pressure injury prevention, moisture management
- Family-centered care: family presence, open visitation, family meetings
- Restraint alternatives: redirection, volunteer sitters, therapeutic intervention first
- Collaboration (4%)
- Interdisciplinary rounds: nursing, physician, pharmacy, RT, PT, SW, chaplain

- SBAR: Situation, Background, Assessment, Recommendation
- Conflict resolution: use team debriefing, ethics consultation, structured dialogue
- Family meetings: set expectations, communicate prognosis clearly
- Facilitation of Learning (3%)
- Assess learning readiness, literacy level, barriers (language, cognition)
- Teach-back method: verify patient/family understanding
- Preceptorship, mentoring, continuing education for staff nurses
- Clinical Inquiry (2%) / Systems Thinking (2%)
- EBP: PICO question, search evidence, appraise, apply, evaluate
- Systems thinking: resource allocation, cost-effectiveness, policy impact
- Response to diversity: cultural humility, health equity, individualized care

MODULE 8

Evidence-Based Interventions and Critical Care Protocols

Evidence-Based Critical Care Protocols

Key Bundles, Guidelines & Best Practices

ICU Care Bundles

- Ventilator Bundle (IHI): HOB 30-45 degrees, DVT prophylaxis, PUD prophylaxis, daily SBT/SAT, oral care
- CLABSI Bundle: hand hygiene, maximal barrier precaution, CHG skin prep, avoid femoral site, daily review
- Sepsis Hour-1 Bundle: lactate, cultures, antibiotics, fluids, vasopressors
- ABCDEF Bundle: Pain, SAT/SBT, sedation choice, delirium, early mobility, family

Evidence-Based Specific Interventions

- ARDS: LPV 6 mL/kg IBW, PEEP titration, prone ≥ 16 hrs/day (PROSEVA trial)
- Therapeutic hypothermia: 32-36 degrees C for 24 hrs post-cardiac arrest (TTM trial)
- Glucose control: 140-180 mg/dL (NICE-SUGAR trial - tight control harmful)
- Transfusion threshold: Hgb < 7 g/dL in stable patients (TRICC trial)
- Early enteral nutrition: within 24-48 hrs of ICU admission (preferred over TPN)
- Continuous renal replacement therapy (CRRT): preferred in hemodynamically unstable AKI
- NOAC (novel anticoagulants): preferred over warfarin for AF in stable patients

High-Yield EBP Facts for CCRN

- Avoid routine suctioning - suction only when indicated (assessment-based)
- Closed-system suction preferred for mechanically ventilated patients
- CHG bathing (daily): reduces CLABSI, MRSA colonization
- Delirium screening every shift: CAM-ICU or ICDSC
- Sedation holidays: reduce ICU LOS, vent days, PTSD
- Early progressive mobility: reduces ICU-acquired weakness
- Family presence during resuscitation: reduces family PTSD
- ICU diaries: reduce incidence of PTSD in ICU survivors and families
- Selective oral decontamination (SOD): reduces VAP in some protocols
- DVT prophylaxis: LMWH preferred (enoxaparin); mechanical if bleeding risk
- Pharmacist-led antibiotic stewardship: reduces MDR organisms and CDI

MODULE 9

Hemodynamic Monitoring and Mechanical Ventilation

Pulmonary Artery Catheter & Advanced Monitoring

Hemodynamic Monitoring – High-Yield

PA Catheter (Swan-Ganz) Waveforms

- RA pressure (CVP): 2-8 mmHg - reflects preload of RIGHT heart
- RV pressure: 15-25/0-8 mmHg
- PA pressure: 15-25/8-15 mmHg; MPAP <25 mmHg normal
- PCWP/PAOP: 6-12 mmHg - reflects LEFT heart preload (wedged position)
- CO by thermodilution: 4-8 L/min; CI = CO BSA (normal 2.4-4.0)
- Mixed venous O₂ (SvO₂): 60-80%; <60% = increased O₂ demand or low delivery

Arterial Line Waveform

- Dicrotic notch: aortic valve closure; absence = vasodilation
- Overdamping: narrow, blunted waveform - check for air bubble, clot, kinked tubing
- Underdamping: tall, narrow, resonant - falsely high SBP, falsely low DBP
- Zero transducer at phlebostatic axis (4th ICS, midaxillary line)

Ventilator Settings & Interpretation

- FiO₂: start at 100%, titrate to SpO₂ 94-98% (88-92% in COPD)
- Tidal volume (VT): 6-8 mL/kg IBW; 6 mL/kg for ARDS
- RR: 12-20 breaths/min (adjust for pH/PaCO₂)
- PEEP: 3-5 cmH₂O baseline; titrate up for ARDS oxygenation
- Peak pressure: reflects total airway resistance
- Plateau pressure: reflects alveolar/lung compliance (goal ≤30 cmH₂O)
- Auto-PEEP: air trapping; treat by increasing expiratory time, reducing RR

Hemodynamic Formulas

- MAP = (SBP + 2xDBP) / 3 (normal 70-100 mmHg)
- SVR = (MAP - CVP) / CO x 80 (normal 800-1200)
- DO₂ = CO x CaO₂ x 10 (oxygen delivery)
- PP variation >13%: predict fluid responsiveness in ventilated pt

MODULE 10

Pharmacology in Critical Care

Vasoactive Agents & Critical Care Medications

Pharmacology – High-Yield

Vasopressors & Inotropes

- Norepinephrine: first-line vasopressor in septic shock; alpha + beta-1
- Vasopressin: 0.03-0.04 units/min; adjunct in refractory septic shock
- Epinephrine: anaphylaxis first-line; cardiac arrest; secondary vasopressor
- Phenylephrine: pure alpha-1; tachycardia-associated hypotension (SVT + hypotension)
- Dobutamine: beta-1 inotrope; cardiogenic shock (low CO, normal/high BP)
- Milrinone: PDE inhibitor, inotrope + vasodilator; avoid in hypotension
- Dopamine: low dose (1-3 mcg): renal (controversial); moderate (3-10): beta; high (>10): alpha

Sedation & Analgesia

- Propofol: rapid onset/offset; triglyceride monitoring; propofol infusion syndrome (PRIS) >5 mg/kg/hr >48h
- Dexmedetomidine: alpha-2 agonist; preserves respiratory drive; no delirium; hypotension/bradycardia side effects
- Midazolam: benzodiazepine; associated with delirium; use with caution in elderly
- Ketamine: dissociative; bronchodilator; useful in status asthmaticus; increases secretions

Antidotes – Must Know

Heparin → Protamine sulfate

- Warfarin → Vitamin K + FFP (emergent: 4-factor PCC)

Dabigatran (Pradaxa) → Idarucizumab (Praxbind)

Rivaroxaban/Apixaban → Andexanet alfa (Andexxa)

Opioids → Naloxone (Narcan)

Benzodiazepines → Flumazenil

Acetaminophen → N-acetylcysteine (NAC)

- Digoxin toxicity → Digoxin immune Fab (Digibind)

Magnesium toxicity → Calcium gluconate

- Organophosphates → Atropine + Pralidoxime (2-PAM)

High-Alert Medications in ICU

- Concentrated electrolytes: never administer undiluted KCl or concentrated NaCl
- Insulin: double-check dose, concentration; hypoglycemia risk
- Heparin: weight-based protocols; aPTT monitoring

MODULE 11

Practice Questions 1–310

This practice set contains 310 unique board-style questions aligned to Adult CCRN clinical judgment and professional caring domains. Select the single best answer. Check the answer key only after completing a full set.

Scoring tip: Aim for 75%+ overall, with focused remediation on any system scoring below 70%.

Question 1

A patient with STEMI arrives to the ED. What is the optimal door-to-balloon time?

- A. <60 minutes
- B. <30 minutes
- C. <90 minutes
- D. <120 minutes

Question 2

Which hemodynamic profile is consistent with cardiogenic shock?

- A. down PCWP, down CO, down SVR
- B. up PCWP, down CO, up SVR
- C. down PCWP, up CO, down SVR
- D. up PCWP, up CO, up SVR

Question 3

A patient develops sudden hypotension, muffled heart sounds, and JVD after a stab wound to the chest. The priority intervention is:

- A. Immediate intubation
- B. Emergency pericardiocentesis
- C. Administration of normal saline 1L bolus
- D. Placement of chest tube

Question 4

Which arrhythmia is CONTRAINDICATED for treatment with adenosine?

- A. SVT
- B. Sinus tachycardia
- C. Wolff-Parkinson-White (WPW)
- D. Atrial flutter

Question 5

A patient receiving heparin post-CABG develops a platelet count drop from 220,000 to 95,000 on day 7. The MOST appropriate action is:

- A. Discontinue all heparin and start argatroban
- B. Increase heparin dose and recheck CBC
- C. Administer platelet transfusion
- D. Add aspirin and reassess in 24 hours

Question 6

The normal range for cardiac index (CI) is:

- A. 2.4-4.0 L/min/m
- B. 1.0-2.0 L/min/m
- C. 4.0-6.0 L/min/m
- D. 0.8-1.5 L/min/m

Question 7

Torsades de Pointes is BEST treated with:

- A. Amiodarone 150 mg IV
- B. Magnesium sulfate 2g IV
- C. Lidocaine 1 mg/kg IV
- D. Synchronized cardioversion

Question 8

An aortic dissection Type A is defined by:

- A. Involvement of the descending aorta only
- B. Isolated involvement of the arch
- C. Involvement below the renal arteries
- D. Involvement of the ascending aorta requiring surgical repair

Question 9

A patient with heart failure has a PCWP of 22 mmHg and CI of 1.8 L/min/m. Which agent is MOST appropriate?

- A. Phenylephrine
- B. Norepinephrine
- C. Dobutamine
- D. Vasopressin

Question 10

The IABP inflates during which phase of the cardiac cycle?

- A. Systole
- B. Late diastole
- C. Early diastole
- D. Isovolumetric contraction

Question 11

Which ECG finding is MOST associated with hyperkalemia?

- A. Prolonged QT interval
- B. Delta wave
- C. Peaked T waves
- D. U waves

Question 12

A patient with third-degree heart block is hypotensive with HR 32. The initial treatment is:

- A. Adenosine 6 mg IV push
- B. Amiodarone 300 mg IV
- C. Atropine 1 mg IV and transcutaneous pacing
- D. Defibrillation at 200 J

Question 13

Which vasopressor is FIRST-LINE in septic shock according to Surviving Sepsis Guidelines?

- A. Epinephrine
- B. Dopamine
- C. Norepinephrine
- D. Phenylephrine

Question 14

Pulsus paradoxus is defined as:

- A. SBP increase >10 mmHg with inspiration
- B. SBP decrease >10 mmHg with inspiration
- C. DBP increase >10 mmHg with expiration
- D. HR increase >10 bpm with inspiration

Question 15

A patient on an IABP has an augmentation ratio of 1:2. This means:

- A. The balloon inflates every 2nd heartbeat
- B. The balloon inflates twice per heartbeat
- C. The balloon deflates every 2nd heartbeat
- D. The patient's heart rate is 1:2 ratio

Question 16

Which of the following is an absolute contraindication to IABP therapy?

- A. Recent MI
- B. Stable angina
- C. Cardiomyopathy
- D. Aortic regurgitation

Question 17

A patient with known Wolff-Parkinson-White develops rapid AF with a rate of 180. Which drug should be AVOIDED?

- A. Adenosine
- B. Procainamide
- C. Ibutilide
- D. Synchronized cardioversion

Question 18

Normal SVR range is:

- A. 400-600 dynes/sec/cm-5
- B. 800-1200 dynes/sec/cm-5
- C. 1400-1800 dynes/sec/cm-5
- D. 200-400 dynes/sec/cm-5

Question 19

Post-CABG a patient develops chest tube output of 250 mL over 1 hour. The nurse's PRIORITY action is:

- A. Administer protamine sulfate
- B. Increase IV fluids to replace volume
- C. Notify the surgeon immediately
- D. Discontinue the chest tube

Question 20

A patient develops ST elevation in leads II, III, and aVF. Which coronary artery is MOST likely occluded?

- A. Left anterior descending
- B. Left main coronary artery
- C. Right coronary artery
- D. Left circumflex

Question 21

Which finding is MOST consistent with cardiac tamponade on the PA catheter?

- A. Equalization of diastolic pressures (CVP=RV diastolic=PCWP)
- B. Elevated PCWP, low CVP, low CO
- C. Low CVP, high CO, low SVR
- D. Elevated SVR, low PCWP, high CO

Question 22

A patient with hypertensive urgency (SBP 210) is ordered nicardipine IV. The goal BP reduction in the first hour is:

- A. Reduce SBP to <120 mmHg immediately
- B. Reduce SBP to normal within 30 min
- C. Reduce SBP by no more than 25% in the first hour
- D. Hold any antihypertensive; observe first

Question 23

SVT is initially managed with:

- A. Amiodarone IV
- B. Verapamil 5 mg IV
- C. Adenosine 6 mg rapid IV push
- D. Vagal maneuvers first, then adenosine

Question 24

What is the Killip Class for a patient with STEMI who has pulmonary edema on CXR?

- A. Killip I
- B. Killip IV
- C. Killip III
- D. Killip II

Question 25

A patient's arterial line waveform is overdamped. The MOST likely cause is:

- A. Air bubble in the system
- B. Excessive tubing length
- C. Patient movement artifact
- D. Incorrect scale setting

Question 26

Which drug reduces preload AND afterload and is used in acute pulmonary edema?

- A. Epinephrine
- B. Norepinephrine
- C. Nitroprusside
- D. Vasopressin

Question 27

A patient with cardiomyopathy has an EF of 25%. This is classified as:

- A. Preserved EF (HFpEF)
- B. Severely reduced EF (HFrEF)
- C. Mildly reduced EF
- D. Normal EF

Question 28

What ECG change is MOST characteristic of a posterior MI?

- A. ST elevation in V1-V2
- B. Q waves in V1-V6
- C. ST elevation in I and aVL
- D. ST depression and tall R waves in V1-V2

Question 29

Which drug reverses heparin anticoagulation?

- A. Protamine sulfate
- B. Vitamin K
- C. Andexanet alfa
- D. Fresh frozen plasma

Question 30

A patient with new-onset AF and hemodynamic instability. Priority treatment is:

- A. IV amiodarone 150 mg
- B. Rate control with diltiazem
- C. Synchronized cardioversion
- D. Anticoagulation then cardiovert in 4 weeks

Question 31

Dobutamine's primary mechanism is:

- A. Alpha-1 agonist - peripheral vasoconstriction
- B. Alpha-2 agonist - reduces norepinephrine release
- C. Beta-1 agonist - increases myocardial contractility
- D. Non-selective beta blocker

Question 32

The phlebostatic axis for transducer zeroing is at:

- A. 2nd ICS, midclavicular line
- B. 3rd ICS, midclavicular line
- C. 5th ICS, anterior axillary line
- D. 4th ICS, midaxillary line

Question 33

A patient has ST elevation in V1-V4 and a new left bundle branch block. This pattern suggests:

- A. Anterior STEMI (LAD occlusion)
- B. Posterior MI
- C. Inferior STEMI
- D. Lateral STEMI

Question 34

Which rhythm requires UNSYNCHRONIZED defibrillation?

- A. Atrial fibrillation
- B. Stable VT
- C. VF / pulseless VT
- D. SVT with aberrancy

Question 35

Structural heart defect - a patient has a holosystolic murmur at the lower left sternal border with a thrill post-MI. You suspect:

- A. Aortic stenosis
- B. Ventricular septal defect (VSD)
- C. Mitral valve prolapse
- D. Aortic regurgitation

Question 36

A femoral-popliteal bypass patient returns from OR. The PRIORITY vascular assessment is:

- A. Checking urine output
- B. Measuring CVP
- C. Monitoring telemetry for arrhythmia
- D. Assessing pedal pulses and capillary refill in both legs

Question 37

Which hemodynamic finding supports a diagnosis of distributive (septic) shock?

- A. down PCWP, down CO, up SVR
- B. up PCWP, down CO, up SVR
- C. down SVR, up CO, down PCWP (or normal)
- D. up CVP, down CO, up SVR

Question 38

In cardiogenic shock, which intervention is MOST appropriate to bridge to definitive therapy?

- A. IV diuretics
- B. Intra-aortic balloon pump (IABP)
- C. Vasopressin infusion
- D. Calcium channel blockers

Question 39

A patient with chest pain has troponin I of 8.5 ng/mL (nl <0.04), no ST elevation. This is MOST consistent with:

- A. Unstable angina
- B. STEMI
- C. NSTEMI
- D. Stable angina

Question 40

Which intervention DECREASES afterload?

- A. Vasopressin
- B. Norepinephrine
- C. Sodium nitroprusside
- D. Phenylephrine

Question 41

An ECG shows regular P waves with a constant PR interval of 0.24 seconds. This is:

- A. First-degree AV block
- B. Normal sinus rhythm
- C. Second-degree Mobitz I
- D. Second-degree Mobitz II

Question 42

Beck's Triad is associated with which condition?

- A. Tension pneumothorax
- B. Cardiac tamponade
- C. Aortic dissection
- D. Pulmonary embolism

Question 43

A patient post-cardiac catheterization develops sudden groin hematoma and hypotension. Priority intervention is:

- A. Morphine for pain control
- B. Apply warm compress
- C. Manual compression and notify physician STAT
- D. Elevate affected leg

Question 44

Cardiomyopathy type associated with asymmetric septal hypertrophy and LVOT obstruction:

- A. Dilated cardiomyopathy
- B. Arrhythmogenic right ventricular cardiomyopathy
- C. Restrictive cardiomyopathy
- D. Hypertrophic obstructive cardiomyopathy (HOCM)

Question 45

Mixed venous oxygen saturation (SvO₂) of 45% indicates:

- A. Increased oxygen delivery
- B. Normal oxygen consumption
- C. Inadequate oxygen delivery relative to demand
- D. Hyperoxia with excessive O₂ delivery

Question 46

A patient on vasopressin 0.04 units/min for septic shock develops ischemic-appearing skin mottling on fingers. Priority action:

- A. Increase the dose to improve perfusion
- B. Discontinue vasopressin and switch to dopamine
- C. Notify physician and prepare to decrease or discontinue vasopressin
- D. Add phenylephrine to augment

Question 47

Ventricular tachycardia (VT) with a pulse and stable blood pressure is BEST managed with:

- A. Synchronized cardioversion immediately
- B. Amiodarone 150 mg IV infusion over 10 min
- C. Adenosine 6 mg IV
- D. Defibrillation at 200 J

Question 48

Which medication is used as a FIRST-LINE agent for rate control in atrial fibrillation in patients without pre-excitation?

- A. Amiodarone
- B. Lidocaine
- C. Diltiazem
- D. Digoxin

Question 49

A patient with suspected Type A aortic dissection should IMMEDIATELY be prepared for:

- A. Emergency surgical repair
- B. IV labetalol titration as primary treatment
- C. Thrombolytic therapy with tPA
- D. Anticoagulation with heparin

Question 50

Normal left ventricular ejection fraction (LVEF) is:

- A. <40%
- B. 40-55%
- C. 55-75%
- D. 75-90%

Question 51

Pericarditis ECG changes include:

- A. ST elevation in a single lead with Q waves
- B. Right axis deviation and right bundle branch block
- C. Diffuse saddle-shaped ST elevation in most leads; PR depression
- D. ST depression and tall peaked T waves

Question 52

A patient with new-onset complete heart block and inferior MI should receive FIRST:

- A. Atropine 1 mg IV
- B. Transcutaneous pacing
- C. Permanent pacemaker
- D. Amiodarone infusion

Question 53

Acute mitral regurgitation post-MI is characterized by:

- A. Acute onset pulmonary edema with new holosystolic murmur at apex
- B. Slow onset dyspnea over days
- C. Diastolic murmur at LUSB
- D. Gradual increase in left ventricular size over weeks

Question 54

The drug of choice for ventricular fibrillation refractory to defibrillation is:

- A. Lidocaine 1.5 mg/kg
- B. Epinephrine 1 mg IV + amiodarone 300 mg
- C. Atropine 1 mg IV
- D. Vasopressin 40 units IV once

Question 55

Which medication INCREASES automaticity and can be used in symptomatic bradycardia?

- A. Adenosine
- B. Atropine
- C. Amiodarone
- D. Diltiazem

Question 56

ARDS is classified as severe when the PaO₂/FiO₂ ratio is:

- A. 200-300
- B. 300-400
- C. <100
- D. 100-200

Question 57

A patient on mechanical ventilation has a plateau pressure of 38 cmH₂O. The MOST appropriate intervention is:

- A. Decrease tidal volume (reduce to 6 mL/kg IBW)
- B. Increase tidal volume to improve ventilation
- C. Increase PEEP immediately
- D. Increase respiratory rate to improve CO₂ clearance

Question 58

Rapid Shallow Breathing Index (RSBI) indicating readiness for extubation is:

- A. >200
- B. <105
- C. 105-150
- D. >150

Question 59

A patient with ARDS has refractory hypoxemia despite FiO₂ 100% and PEEP 14. The NEXT intervention is:

- A. Decrease PEEP to reduce barotrauma
- B. Immediate extubation
- C. Prone positioning
- D. Start vasopressors

Question 60

Which ABG pattern represents UNCOMPENSATED metabolic acidosis?

- A. pH 7.28, PaCO₂ 28, HCO₃ 12
- B. pH 7.52, PaCO₂ 28, HCO₃ 22
- C. pH 7.42, PaCO₂ 28, HCO₃ 18
- D. pH 7.28, PaCO₂ 52, HCO₃ 24

Question 61

A patient with COPD and acute exacerbation has SpO₂ 84%, is tachypneic. The INITIAL treatment is:

- A. Controlled O₂ titrated to SpO₂ 88-92% + BiPAP
- B. High-flow O₂ at 15 L/min via non-rebreather
- C. Immediate intubation
- D. IV aminophylline infusion

Question 62

S1Q3T3 pattern on ECG is MOST associated with:

- A. Anterior MI
- B. Pulmonary embolism
- C. Pericarditis
- D. Hyperkalemia

Question 63

Status asthmaticus is characterized by:

- A. Asthma controlled by 2 doses of albuterol
- B. Mild intermittent asthma
- C. Life-threatening bronchospasm unresponsive to standard bronchodilators
- D. Asthma triggered only by allergens

Question 64

Tension pneumothorax is treated with:

- A. Stat CXR then chest tube
- B. Intubation and mechanical ventilation
- C. Observation and supplemental O₂
- D. Immediate needle decompression (2nd ICS MCL)

Question 65

Which PEEP level is MOST appropriate for the initial management of ARDS?

- A. 5-8 cmH₂O titrated to oxygenation goals
- B. 0-2 cmH₂O
- C. 20 cmH₂O minimum
- D. PEEP should never exceed 10 in ARDS

Question 66

A ventilated patient has peak pressure 42 but plateau pressure 18 cmH₂O. This suggests:

- A. Decreased lung compliance (ARDS, pneumonia)
- B. Increased airway resistance (bronchospasm, secretions)
- C. Normal ventilation
- D. Auto-PEEP (breath stacking)

Question 67

A patient in acute respiratory failure has pH 7.20, PaCO₂ 72, HCO₃ 26. This ABG represents:

- A. Metabolic acidosis, uncompensated
- B. Respiratory acidosis, partially compensated
- C. Metabolic alkalosis, compensated
- D. Respiratory alkalosis

Question 68

The MOST sensitive test to rule out pulmonary embolism in a low-risk patient is:

- A. D-dimer
- B. Lower extremity Doppler
- C. V/Q scan
- D. CT pulmonary angiography (CTPA)

Question 69

Massive PE treatment in a hemodynamically unstable patient is:

- A. Systemic thrombolytics (tPA) or surgical embolectomy
- B. Anticoagulation with heparin infusion only
- C. Immediate bronchoscopy
- D. CT-guided biopsy

Question 70

Which bronchodilator is preferred for intubation in status asthmaticus?

- A. Propofol
- B. Midazolam
- C. Ketamine
- D. Vecuronium alone

Question 71

Normal tidal volume (TV) for lung protective ventilation in ARDS is:

- A. 10-12 mL/kg IBW
- B. 8-10 mL/kg IBW
- C. 6 mL/kg IBW
- D. 4 mL/kg IBW

Question 72

Spontaneous Breathing Trial (SBT) is performed with the ventilator set at:

- A. AC mode with high PEEP
- B. FiO₂ 100% during trial
- C. SIMV at full support for 4 hours
- D. CPAP/PSV ≤ 5 cmH₂O for 30-120 minutes

Question 73

A patient develops sudden shortness of breath and hypoxemia 3 hours after a blood transfusion. CXR shows bilateral infiltrates. BP is normal. This is MOST consistent with:

- A. TRALI (Transfusion-Related Acute Lung Injury)
- B. TACO (Transfusion-Associated Circulatory Overload)
- C. Acute hemolytic reaction
- D. Anaphylaxis

Question 74

COPD patients should have O₂ titrated to avoid:

- A. Hypercapnia suppression
- B. Hypoxic drive suppression (excessive O₂ reduces hypoxic stimulus)
- C. Respiratory alkalosis
- D. Polycythemia

Question 75

Which ventilator mode delivers a GUARANTEED tidal volume regardless of lung compliance?

- A. Pressure Support (PSV)
- B. Volume-controlled Assist Control (AC/VC)
- C. Continuous positive airway pressure (CPAP)
- D. Airway pressure release ventilation (APRV)

Question 76

Pulmonary hypertension is defined as mean pulmonary arterial pressure of:

- A. >15 mmHg
- B. Normal PAP
- C. >30 mmHg
- D. >20 mmHg at rest (current ESC guideline)

Question 77

Auto-PEEP (intrinsic PEEP) is BEST managed by:

- A. Decreasing I:E ratio - allowing more time for expiration
- B. Increasing tidal volume
- C. Increasing the respiratory rate
- D. Adding extrinsic PEEP equivalent to auto-PEEP

Question 78

Pulmonary hypertension in ICU can be treated with inhaled:

- A. Oxygen at 100%
- B. Nitric oxide (iNO)
- C. Carbon dioxide
- D. Heliox (helium-oxygen)

Question 79

After bronchoscopy with biopsy, the nurse should FIRST assess for:

- A. Urinary output changes
- B. Cardiovascular arrhythmias
- C. Respiratory distress and hemoptysis
- D. Skin changes

Question 80

A patient has fractured ribs 5-9 on the right. With inspiration, the right chest wall moves inward. This describes:

- A. Simple pneumothorax
- B. Tension pneumothorax
- C. Hemothorax
- D. Flail chest

Question 81

Which acid-base disorder is MOST commonly associated with severe COPD exacerbation?

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

Question 82

Chest tube insertion for hemothorax requires what MINIMUM drainage before surgical thoracotomy is indicated?

- A. 500 mL total
- B. 1500 mL initial or 200 mL/hr x 2-4 hrs
- C. 1000 mL total
- D. 250 mL/hr x 1 hour

Question 83

Which intervention REDUCES the incidence of ventilator-associated pneumonia (VAP)?

- A. Supine positioning
- B. Continuous sedation without waking
- C. HOB elevation 30-45 degrees , daily oral CHG care, hand hygiene
- D. Use of humidified oxygen without HEPA filter

Question 84

A patient receiving mechanical ventilation has rising peak airway pressures with normal plateau. The cause is MOST likely:

- A. Decreased lung compliance
- B. Pulmonary fibrosis
- C. Pneumothorax
- D. Increased airway resistance (bronchospasm, kinked ET tube, mucus plug)

Question 85

Permissive hypercapnia is USED in which condition?

- A. Severe ARDS and status asthmaticus (allow CO₂ to rise to reduce volutrauma)
- B. Metabolic alkalosis
- C. Heart failure
- D. Renal failure

Question 86

Which drug is first-line for empiric antibiotic treatment of community-acquired pneumonia in an ICU patient?

- A. Penicillin VK alone
- B. Beta-lactam PLUS azithromycin or fluoroquinolone
- C. Azithromycin alone
- D. Vancomycin monotherapy

Question 87

A patient has acute pulmonary edema secondary to flash heart failure. Initial treatment includes:

- A. IV fluids wide open
- B. Prone positioning
- C. Morphine, furosemide, nitroglycerin, and upright positioning
- D. Intubation and PEEP 20 immediately

Question 88

Which ABG pattern is consistent with ACUTE respiratory alkalosis?

- A. pH 7.28, PaCO₂ 55, HCO₃ 24
- B. pH 7.32, PaCO₂ 32, HCO₃ 14
- C. pH 7.42, PaCO₂ 28, HCO₃ 16
- D. pH 7.55, PaCO₂ 28, HCO₃ 24 (uncompensated)

Question 89

A patient with pulmonary embolism on heparin develops chest pain and new hypotension. The NEXT intervention is:

- A. Administer tPA thrombolytics
- B. Increase heparin dose
- C. Perform bronchoscopy
- D. Start amiodarone for suspected arrhythmia

Question 90

Thoracic surgery patients require assessment for:

- A. GI bleeding only
- B. Air leak in chest tube drainage system and breath sounds
- C. Pupillary changes
- D. Glucose levels

Question 91

Normal PaO₂ range on room air is:

- A. 60-70 mmHg
- B. 110-120 mmHg
- C. 80-100 mmHg
- D. 50-60 mmHg

Question 92

The MOST common cause of acute respiratory failure is:

- A. Pulmonary embolism
- B. Pneumothorax
- C. Asthma alone
- D. Pneumonia with sepsis

Question 93

A patient's ventilator alarms high pressure. You note absent breath sounds on the left. FIRST action:

- A. Auscultate right mainstem bronchus and withdraw ET tube 2-3 cm
- B. Suction the endotracheal tube
- C. Increase tidal volume
- D. Call respiratory therapy

Question 94

Which finding indicates the patient has FAILED the spontaneous breathing trial?

- A. SpO₂ 96%, RR 18, no distress
- B. SpO₂ 86%, RR 36, diaphoresis, accessory muscle use
- C. SpO₂ 94%, RR 22 at 10 min, stable
- D. Mild increase in RR from 16 to 20

Question 95

The 'A-a gradient' is clinically useful for:

- A. Assessing metabolic acidosis severity
- B. Calculating minute ventilation
- C. Distinguishing pulmonary vs. non-pulmonary causes of hypoxemia
- D. Determining cardiac output

Question 96

A patient with Guillain-Barré syndrome is being monitored for respiratory failure. The parameter to MOST closely watch is:

- A. SpO₂ alone
- B. Peak expiratory flow rate
- C. ABG every 8 hours only
- D. Vital capacity (VC) - intubate if <20 mL/kg or <15 mL/kg

Question 97

After endotracheal intubation, the FIRST step to confirm tube placement is:

- A. Observation of chest rise and auscultation; then waveform capnography
- B. CXR only
- C. SpO2 monitoring
- D. Palpation of trachea

Question 98

A patient with submersion (near-drowning) injury presents with normal SpO2 on arrival. The nurse knows:

- A. The patient can be safely discharged if SpO2 remains normal for 1 hour
- B. ARDS may develop up to 24 hours after submersion - observation is required
- C. No further monitoring is needed
- D. IV antibiotics should be started immediately

Question 99

Inhaled nitric oxide (iNO) works by:

- A. Causing systemic arterial vasodilation
- B. Increasing cardiac contractility
- C. Selectively dilating the pulmonary vasculature in ventilated lung units
- D. Bronchodilating the large airways

Question 100

The FiO2 delivered by a simple face mask at 8 L/min is approximately:

- A. 21%
- B. 90-100%
- C. 60-70%
- D. 35-50%

Question 101

Which pulmonary condition is associated with 'ground glass opacities' on CT chest?

- A. ARDS / interstitial pneumonia
- B. COPD emphysema
- C. Large pleural effusion
- D. Pneumothorax

Question 102

A patient develops sudden chest pain, hypoxia, and a deviated trachea. The IMMEDIATE nursing action is:

- A. Obtain a STAT CXR
- B. Prepare for needle decompression - tension pneumothorax
- C. Place patient supine and increase O2
- D. Start CPR

Question 103

Surfactant's primary function in the lungs is to:

- A. Transport oxygen across alveolar membrane
- B. Serve as a bacteriocidal defense mechanism
- C. Reduce surface tension and prevent alveolar collapse
- D. Increase O2 consumption

Question 104

Non-invasive positive pressure ventilation (BiPAP) is CONTRAINDICATED in:

- A. COPD exacerbation
- B. Cardiogenic pulmonary edema
- C. Obstructive sleep apnea
- D. Acute respiratory failure with vomiting and altered LOC

Question 105

The PRIMARY goal of oxygen therapy in respiratory failure is to maintain PaO₂ at:

- A. ≥ 60 mmHg (SpO₂ $\geq 90\%$)
- B. < 60 mmHg
- C. > 120 mmHg
- D. Exactly 80 mmHg at all times

Question 106

Pulmonary contusion is MOST commonly associated with:

- A. Penetrating chest trauma
- B. Blunt chest trauma (e.g., MVA with steering wheel impact)
- C. Spontaneous pneumothorax
- D. Aspiration

Question 107

A patient has pH 7.38, PaCO₂ 52, HCO₃ 30. This ABG represents:

- A. Uncompensated respiratory acidosis
- B. Metabolic alkalosis, partially compensated
- C. Fully compensated respiratory acidosis (chronic)
- D. Normal ABG

Question 108

Which intervention is PROVEN to reduce mortality in ARDS?

- A. High tidal volume ventilation
- B. Early paralysis with cisatracurium alone (no LPV)
- C. 100% FiO₂ for the first 24 hours
- D. Low tidal volume ventilation (ARMA trial, 6 mL/kg IBW)

Question 109

A patient on mechanical ventilation has increased peak AND plateau pressures. This suggests:

- A. Decreased lung compliance (pulmonary edema, ARDS, atelectasis)
- B. Increased airway resistance alone
- C. Right mainstem intubation
- D. Auto-PEEP

Question 110

A patient post-thoracotomy has 400 mL of bright red chest tube output in 2 hours. The nurse's FIRST action is:

- A. Clamp the chest tube
- B. Notify the surgeon STAT
- C. Document and continue monitoring
- D. Increase IV fluids to compensate

Question 111

DKA is differentiated from HHS primarily by:

- A. Blood glucose level
- B. Age of the patient
- C. Presence of significant ketonemia and anion gap metabolic acidosis
- D. Presence of altered mental status

Question 112

In DKA, insulin infusion should NOT be started until serum potassium is:

- A. <2.5 mEq/L
- B. Exactly 4.0 mEq/L
- C. >5.0 mEq/L
- D. ≥ 3.5 mEq/L

Question 113

AKI Stage 3 (KDIGO) is defined by serum creatinine:

- A. 3 times baseline OR ≥ 4 mg/dL
- B. 2.0-2.9 times baseline
- C. 1.5-1.9 times baseline
- D. 1.3 times baseline

Question 114

A patient has sodium 118 mEq/L with seizures. The APPROPRIATE initial treatment is:

- A. Rapid correction of sodium to 140 mEq/L
- B. Hypertonic saline (3%) with correction rate $\leq 1-2$ mEq/L/hr
- C. Strict fluid restriction only
- D. Vasopressin receptor antagonist first

Question 115

Which sign is pathognomonic for hemorrhagic pancreatitis?

- A. Murphy's sign
- B. Homan's sign
- C. Grey Turner's sign (flank bruising) and Cullen's sign (periumbilical bruising)
- D. Chvostek's sign

Question 116

The antidote for acetaminophen (Tylenol) overdose is:

- A. Activated charcoal
- B. Flumazenil
- C. Naloxone
- D. N-acetylcysteine (NAC)

Question 117

HIT type II is characterized by:

- A. Immune-mediated drop in platelets ($>50\%$) 5-14 days after heparin + thrombotic risk
- B. Mild thrombocytopenia without thrombosis within 24-48 hrs of heparin exposure
- C. Platelet count drop from baseline by 10%
- D. Non-immune mechanism with mild platelet decrease

Question 118

CRRT is preferred over intermittent hemodialysis in AKI patients who are:

- A. Hemodynamically stable
- B. Hemodynamically UNSTABLE with hypotension
- C. Chronic kidney disease baseline
- D. Requiring urgent potassium removal

Question 119

A patient with hepatic encephalopathy is ordered lactulose. The goal is:

- A. Maintain constipation to trap ammonia
- B. Suppress all stool output
- C. Achieve 3-4 loose stools per day
- D. Administer only as an enema

Question 120

Which laboratory pattern is consistent with DIC?

- A. up PT, up PTT, up fibrinogen, down D-dimer, thrombocytosis
- B. down PT, down PTT, normal D-dimer
- C. Normal PT, elevated PTT only, low platelets
- D. up PT, up PTT, down fibrinogen, up D-dimer, thrombocytopenia

Question 121

Acute tubular necrosis (ATN) is MOST commonly caused by:

- A. Ischemia or nephrotoxic agents
- B. Urinary tract obstruction
- C. Glomerulonephritis
- D. Interstitial nephritis

Question 122

Tumor lysis syndrome (TLS) is characterized by:

- A. Hypokalemia, hypophosphatemia, hypercalcemia
- B. Hyperkalemia, hyperphosphatemia, hypocalcemia, hyperuricemia
- C. Normal electrolytes with elevated creatinine
- D. Hyponatremia and hypochloremia

Question 123

Parkland formula for burn resuscitation: $4 \text{ mL} \times 70 \text{ kg} \times 40\% \text{ TBSA} = ?$

- A. 7,000 mL; give all in first 8 hrs
- B. 5,000 mL total over 24 hrs
- C. 11,200 mL; give half in first 8 hrs, half over next 16 hrs
- D. 14,000 mL; give evenly over 24 hrs

Question 124

Which lab result is the BEST early indicator of acute kidney injury?

- A. BUN alone
- B. 24-hour urine protein
- C. Urine specific gravity
- D. Serum creatinine rise of 0.3 mg/dL within 48 hrs (KDIGO)

Question 125

A patient with cirrhosis develops sudden mental status change, asterixis, and fetor hepaticus. The priority intervention is:

- A. Lactulose administration and treat precipitating cause
- B. Administer vitamin K
- C. Immediate paracentesis
- D. IV dextrose infusion

Question 126

Thyroid storm is BEST distinguished from severe hyperthyroidism by:

- A. TSH level alone
- B. Burch-Wartofsky Point Scale score ≥ 45 with systemic manifestations
- C. Free T4 level
- D. Heart rate >100 bpm

Question 127

In adrenal crisis, the FIRST priority drug is:

- A. Fludrocortisone
- B. Dexamethasone after ACTH stimulation test
- C. Hydrocortisone 100 mg IV bolus
- D. Aldosterone

Question 128

SIADH is treated with:

- A. IV normal saline wide open
- B. Furosemide alone
- C. IV hypertonic saline in all cases
- D. Fluid restriction (800-1000 mL/day) +/- vaptans

Question 129

Diabetes insipidus (DI) is characterized by:

- A. Large volumes of dilute urine with elevated serum sodium and osmolality
- B. Low urine output with concentrated urine
- C. Hyperkalemia and metabolic acidosis
- D. Oliguria and fluid overload

Question 130

A patient develops peaked T-waves and widened QRS on ECG. Serum K^+ = 6.8. FIRST intervention:

- A. Sodium bicarbonate
- B. Calcium gluconate IV to stabilize cardiac membrane
- C. Furosemide IV
- D. Kayexalate PO

Question 131

Ranson's criteria are used to assess severity of:

- A. Hepatic failure
- B. Acute pancreatitis
- C. Gastrointestinal hemorrhage
- D. Renal failure

Question 132

Upper GI bleed is most commonly caused by:

- A. Colonic diverticulosis
- B. Esophageal varices
- C. Mallory-Weiss tear
- D. Peptic ulcer disease (PUD)

Question 133

A patient with ESRD develops pericardial friction rub, chest pain relieved by leaning forward. This describes:

- A. Uremic pericarditis
- B. Pleuritis
- C. Cardiac tamponade
- D. Myocarditis

Question 134

Which finding is MOST consistent with prerenal AKI?

- A. FENa >2%, muddy brown casts
- B. FENa <1%, high urine osmolality, BUN:Cr ratio >20:1
- C. Eosinophils in urine, recent NSAID use
- D. Urine Na >40, isosthenuria

Question 135

HHS (Hyperglycemic Hyperosmolar State) is characterized by blood glucose usually:

- A. >180 mg/dL with ketones
- B. 300-400 mg/dL with ketonuria
- C. >600 mg/dL WITHOUT significant ketoacidosis
- D. Any glucose with metabolic acidosis

Question 136

Coumadin (warfarin) works by inhibiting:

- A. Factor Xa only
- B. Thrombin directly
- C. Platelet aggregation
- D. Vitamin K-dependent clotting factors (II, VII, IX, X)

Question 137

The MOST common cause of upper GI bleeding in critically ill patients is:

- A. Stress ulcers
- B. Esophageal cancer
- C. Portal hypertension
- D. Peptic ulcer in outpatient

Question 138

Which drug is used to control bleeding from esophageal varices?

- A. Heparin
- B. Octreotide (somatostatin analogue) + endoscopy
- C. Vitamin K IV
- D. Clopidogrel

Question 139

A patient with chronic kidney disease has Hgb 8.5 g/dL. The cause is MOST likely:

- A. Iron deficiency anemia
- B. Vitamin B12 deficiency
- C. Decreased erythropoietin production
- D. Autoimmune hemolytic anemia

Question 140

Abdominal compartment syndrome is defined by intra-abdominal pressure (IAP):

- A. >8 mmHg
- B. >=15 mmHg with normal organ function
- C. >=12 mmHg
- D. >=20 mmHg with new organ dysfunction

Question 141

A patient with DKA has initial K⁺ = 5.2. After starting insulin infusion, K⁺ drops to 3.0. The correct action is:

- A. Replace potassium IV and continue insulin
- B. Continue insulin without change
- C. Hold insulin until K⁺ >=3.5
- D. Administer sodium bicarbonate

Question 142

Trousseau's sign and Chvostek's sign indicate:

- A. Hyperkalemia
- B. Hypocalcemia
- C. Hyponatremia
- D. Hypermagnesemia

Question 143

TRALI (Transfusion-Related Acute Lung Injury) presents within:

- A. 24-48 hrs of transfusion
- B. 72 hrs as late onset
- C. 6 hours of transfusion with hypoxia and non-cardiogenic pulmonary edema
- D. Only after massive transfusion >10 units

Question 144

Heparin-induced thrombocytopenia (HIT) management requires:

- A. Increasing heparin dose
- B. Warfarin immediately
- C. Platelet transfusion
- D. Stopping ALL heparin and starting alternative anticoagulation (argatroban, bivalirudin)

Question 145

Which electrolyte imbalance is MOST associated with prolonged QT interval?

- A. Hypokalemia and hypomagnesemia
- B. Hyperkalemia
- C. Hypercalcemia
- D. Hyponatremia

Question 146

Stevens-Johnson Syndrome / TEN (Toxic Epidermal Necrolysis) requires:

- A. Topical antibiotic cream only
- B. Transfer to burn center, wound care, stop offending drug
- C. Systemic corticosteroids as primary therapy
- D. Antiviral therapy

Question 147

Myxedema coma is treated with:

- A. Thyroidectomy
- B. Oral propylthiouracil
- C. IV levothyroxine + stress-dose steroids + warming measures
- D. Radioactive iodine

Question 148

Refeeding syndrome is characterized by hypophosphatemia because:

- A. Kidneys excrete excess phosphate
- B. Liver converts phosphate to glucose
- C. Phosphate is not present in feeding solutions
- D. Phosphate shifts intracellularly with insulin surge upon carbohydrate reintroduction

Question 149

Which statement about CRRT anticoagulation is CORRECT?

- A. Citrate regional anticoagulation minimizes systemic bleeding risk
- B. Heparin cannot be used
- C. No anticoagulation is ever needed
- D. LMWH is the only acceptable agent

Question 150

A patient receiving blood transfusion develops fever, rigors, hypotension, and flank pain 30 minutes into infusion. FIRST action is:

- A. Administer diphenhydramine and continue transfusion
- B. Stop transfusion immediately - suspected acute hemolytic transfusion reaction
- C. Slow transfusion rate
- D. Administer acetaminophen

Question 151

The Glasgow Coma Scale (GCS) scores:

- A. Pupillary response, motor, verbal
- B. Level of consciousness 1-10
- C. Eye opening, verbal response, motor response (total 3-15)
- D. Neurological deficits only

Question 152

Cushing's Triad (sign of severe ICP elevation) consists of:

- A. Hypotension, tachycardia, tachypnea
- B. Hypertension (widened pulse pressure), bradycardia, irregular respirations
- C. Hypotension, bradycardia, apnea
- D. Normal BP, tachycardia, polyuria

Question 153

Ischemic stroke treatment: tPA should be given within:

- A. 3-4.5 hours of symptom onset (last known well time)
- B. 6 hours of symptom onset
- C. 12 hours
- D. 24 hours

Question 154

A patient with ischemic stroke is NOT a candidate for tPA if:

- A. BP is 170/95 before treatment
- B. BP >185/110 that cannot be controlled, recent surgery, active bleeding, INR >1.7
- C. Onset was 2 hours ago
- D. Blood glucose is 160 mg/dL

Question 155

Status epilepticus first-line treatment is:

- A. Phenytoin loading dose
- B. Levetiracetam (Keppra)
- C. Benzodiazepine IV (lorazepam or diazepam) FIRST
- D. Phenobarbital

Question 156

Herniation syndrome - uncal herniation - presents with:

- A. Bilateral miosis (pinpoint pupils)
- B. Bilateral Babinski signs only
- C. Equal and reactive pupils
- D. Ipsilateral fixed dilated pupil (CN III compression) + contralateral hemiplegia

Question 157

Normal intracranial pressure (ICP) is:

- A. 5-15 mmHg
- B. 20-25 mmHg
- C. 25-35 mmHg
- D. <5 mmHg

Question 158

In subarachnoid hemorrhage (SAH), the CLASSIC presenting symptom is:

- A. Gradual onset unilateral headache
- B. Sudden severe 'thunderclap' headache - worst of life
- C. Nausea and vomiting only
- D. Visual field defect without headache

Question 159

Nimodipine is given after SAH to:

- A. Reduce cerebral edema
- B. Treat the bleeding source
- C. Prevent vasospasm and reduce neurological deficits
- D. Lower ICP

Question 160

Delirium in the ICU is BEST assessed using:

- A. Mini-Mental Status Exam (MMSE)
- B. RASS scale alone
- C. GCS alone
- D. CAM-ICU (Confusion Assessment Method for the ICU)

Question 161

A patient with traumatic brain injury (TBI) has ICP of 25 mmHg. Target CPP is:

- A. 60-70 mmHg
- B. 40-50 mmHg
- C. 80-90 mmHg
- D. >100 mmHg

Question 162

CPP is calculated as:

- A. ICP + MAP
- B. MAP - ICP
- C. SBP - ICP
- D. MAP + CVP

Question 163

Interventions to REDUCE ICP include:

- A. Trendelenburg position
- B. Hyperventilate to PaCO₂ 20 mmHg
- C. HOB 30 degrees, normocapnia (PaCO₂ 35-40), mannitol or hypertonic saline, sedation
- D. Aggressive IV fluid boluses

Question 164

Spinal cord injury at C4 - the nurse anticipates:

- A. Paraplegia with intact arm function
- B. Quadriplegia with intact respiratory function
- C. Incomplete paraplegia
- D. Ventilator dependence - diaphragm function lost above C4

Question 165

Neurogenic shock differs from other shock types by:

- A. Hypotension WITH bradycardia (loss of sympathetic tone) - unlike most shock
- B. High SVR, high BP
- C. Tachycardia with hypotension
- D. High CVP with low BP

Question 166

A patient develops sudden severe headache, nausea, and loss of consciousness after a fall. CT shows hyperdense biconvex lens-shaped collection. This is MOST likely:

- A. Subdural hematoma
- B. Epidural hematoma (arterial bleed, lucid interval, biconvex lens on CT)
- C. Subarachnoid hemorrhage
- D. Intracerebral hemorrhage

Question 167

The MOST common type of stroke is:

- A. Hemorrhagic stroke
- B. Subarachnoid hemorrhage
- C. Ischemic stroke (~85% of all strokes)
- D. Transient ischemic attack

Question 168

Brain death criteria require ALL of the following EXCEPT:

- A. Irreversible coma
- B. Absence of all brainstem reflexes
- C. Apnea test positive
- D. Response to pain stimulus present

Question 169

Alcohol withdrawal delirium tremens (DTs) peaks at:

- A. 48-72 hours after last drink (high mortality risk)
- B. 12-24 hours after last drink
- C. 1 week after
- D. Only in first 6 hours

Question 170

CIWA-Ar score is used to assess:

- A. Delirium severity in cardiac patients
- B. Severity of alcohol withdrawal symptoms
- C. Sedation level
- D. Pain intensity

Question 171

A patient with acute C5-C6 spinal cord injury develops hypertension (BP 220/110), bradycardia, and diaphoresis above the level of injury. This is:

- A. Neurogenic shock
- B. Cushing response
- C. Autonomic dysreflexia - triggered by noxious stimulus below injury level
- D. Hypertensive emergency unrelated to SCI

Question 172

Autonomic dysreflexia FIRST treatment:

- A. Administer IV labetalol
- B. Place in Trendelenburg
- C. Administer nitroprusside
- D. Sit patient upright immediately and identify/remove noxious stimulus

Question 173

Guillain-Barr syndrome is treated with:

- A. IVIG or plasmapheresis
- B. Corticosteroids (first-line)
- C. Antibiotics
- D. Antiviral agents

Question 174

Myasthenic crisis presents with:

- A. Muscle hypertonia and hyperreflexia
- B. Respiratory muscle weakness and failure requiring ventilatory support
- C. Flaccid paralysis of lower extremities only
- D. Autonomic instability with normal respiratory function

Question 175

Decorticate posturing indicates injury at the level of:

- A. Brainstem (below midbrain)
- B. Spinal cord below C4
- C. Cerebral cortex or internal capsule (above brainstem)
- D. Cerebellum

Question 176

Decerebrate posturing indicates:

- A. Cortical injury only
- B. C3 spinal injury
- C. Cerebellar lesion
- D. Midbrain/brainstem injury - worse prognosis than decorticate

Question 177

Phenytoin (Dilantin) therapeutic level is:

- A. 10-20 mcg/mL (or free phenytoin 1-2 mcg/mL)
- B. 5-10 mcg/mL
- C. 20-30 mcg/mL
- D. <5 mcg/mL

Question 178

Meningitis classic triad includes:

- A. Fever, headache, photophobia
- B. Fever, neck stiffness (nuchal rigidity), and altered mental status
- C. Rash, fever, confusion
- D. Hypotension, fever, tachycardia

Question 179

A patient with bacterial meningitis is ordered dexamethasone. The PRIMARY reason is:

- A. To treat infection
- B. Treat the associated DIC
- C. Reduce inflammation and prevent neurological complications
- D. Lower ICP rapidly

Question 180

ICU delirium risk factors include:

- A. Young age, normal sleep cycle
- B. Only alcohol withdrawal
- C. High RASS, no sedation, ambulation
- D. Sleep deprivation, benzodiazepine use, immobility, pain, sensory deprivation

Question 181

RASS score of -3 means:

- A. Moderate sedation - opens eyes to voice but no contact
- B. Alert and calm
- C. Unarousable
- D. Agitated, pulling at lines

Question 182

Which antidepressant is associated with serotonin syndrome in overdose?

- A. Haloperidol
- B. SSRIs (e.g., fluoxetine, sertraline) or interaction with MAOIs
- C. Benzodiazepines
- D. Beta blockers

Question 183

Serotonin syndrome classic triad:

- A. Bradycardia, hypothermia, flaccidity
- B. Sedation, miosis, respiratory depression
- C. Hyperthermia, clonus/rigidity, agitation
- D. Hypertension, tachycardia, diaphoresis only

Question 184

A patient in the ICU is expressing suicidal ideation. The nurse's FIRST action is:

- A. Notify security and restrain
- B. Administer sedation
- C. Document and notify physician in 1 hour
- D. Ensure environmental safety, remove harmful objects, maintain constant observation

Question 185

Transient Ischemic Attack (TIA) is defined by neurological deficits that resolve within:

- A. 24 hours with NO evidence of infarction on imaging
- B. 72 hours
- C. 48 hours
- D. 1 week

Question 186

The NIHSS (NIH Stroke Scale) is used to:

- A. Grade the severity of subarachnoid hemorrhage
- B. Quantify neurological deficits in stroke (higher score = more severe)
- C. Monitor ICP
- D. Assess withdrawal symptoms

Question 187

A patient with a skull fracture has clear fluid draining from the nose. The nurse suspects:

- A. Sinusitis
- B. Normal post-injury drainage
- C. CSF rhinorrhea - do NOT insert NG tube; notify physician
- D. Allergic reaction

Question 188

Mannitol is given for increased ICP. The nurse MONITORS for:

- A. Hypoglycemia
- B. Coagulation abnormalities
- C. Bradycardia
- D. Serum osmolality >320 mOsm/kg (toxicity), urine output, electrolytes

Question 189

Wernicke's encephalopathy is caused by:

- A. Folate deficiency
- B. Thiamine (vitamin B1) deficiency - treat with IV thiamine BEFORE glucose
- C. Vitamin B12 deficiency
- D. Magnesium deficiency

Question 190

Target temperature management (TTM) after cardiac arrest targets core temperature of:

- A. 38-39 degrees C
- B. 32-36 degrees C for 24 hours (then gradual rewarming)
- C. 30-32 degrees C for 48 hours
- D. 36-37 degrees C for 12 hours

Question 191

Fat embolism syndrome after long bone fracture presents with:

- A. Only respiratory failure
- B. Pain at fracture site only
- C. Hypoxia, petechiae (axillary/conjunctival), confusion (classic triad)
- D. Coagulopathy and liver failure

Question 192

Rhabdomyolysis is associated with MARKEDLY elevated:

- A. Troponin
- B. D-dimer
- C. ALT/AST
- D. CPK (CK) - often >10,000 U/L; myoglobinuria, AKI risk

Question 193

Treatment for rhabdomyolysis focuses on:

- A. Aggressive IV fluid resuscitation to maintain UO 200-300 mL/hr
- B. Aggressive diuresis with furosemide
- C. Dialysis immediately
- D. Blood transfusion

Question 194

A patient with C2 spinal cord injury is at GREATEST risk for:

- A. Urinary incontinence only
- B. Respiratory failure - requires mechanical ventilation (C3-5 innervates diaphragm)
- C. Lower extremity paralysis only
- D. Autonomic dysreflexia only

Question 195

Post-traumatic stress disorder (PTSD) in ICU survivors is BEST prevented by:

- A. Strict visiting restrictions
- B. High-dose benzodiazepines during stay
- C. ICU diaries, family inclusion, sleep promotion, early mobility, avoiding unnecessary sedation
- D. Amnesia-inducing medications

Question 196

A patient is postictal after a grand mal seizure. Priority nursing action:

- A. Insert oral airway immediately
- B. Give phenytoin IV immediately
- C. Restrain patient firmly
- D. Protect airway, position on side, O2, maintain safety; monitor for repeat seizure

Question 197

Dexmedetomidine (Precedex) has the advantage over propofol in ICU sedation because:

- A. It preserves respiratory drive and reduces delirium incidence
- B. It causes more reliable amnesia
- C. It is cheaper
- D. It works faster

Question 198

Pain assessment in non-verbal ICU patients is BEST done using:

- A. Patient self-report only
- B. BPS (Behavioral Pain Scale) or CPOT (Critical-Care Pain Observation Tool)
- C. Vital signs alone
- D. Pupillary changes

Question 199

A patient receiving enteral tube feeding develops high gastric residual volumes (>500 mL). FIRST action:

- A. Stop feeding permanently
- B. Increase feeding rate
- C. Hold feeding temporarily, reassess, consider prokinetic agents (metoclopramide)
- D. Switch to TPN immediately

Question 200

Which intervention is associated with REDUCED delirium in the ICU?

- A. Continued benzodiazepine sedation
- B. Minimizing family presence
- C. Continuous restraints
- D. ABCDEF bundle implementation - includes spontaneous awakening, mobility, family engagement

Question 201

Sepsis is defined as:

- A. Life-threatening organ dysfunction caused by dysregulated host response to infection (Sepsis-3)
- B. Positive blood cultures
- C. SIRS criteria alone
- D. Fever + elevated WBC + infection source

Question 202

Septic shock differs from sepsis by:

- A. Only having a positive culture
- B. Requiring vasopressors to maintain MAP ≥ 65 AND lactate > 2 mmol/L despite adequate fluids
- C. Requiring 2 SIRS criteria
- D. Higher WBC count

Question 203

Sepsis Hour-1 Bundle includes:

- A. CXR, urine culture, start diuresis
- B. Start steroids and vasopressin only
- C. Measure lactate, blood cultures x2 before antibiotics, broad-spectrum antibiotics, 30 mL/kg IV crystalloid if hypotension or lactate ≥ 4 , vasopressors if MAP < 65
- D. Urinary catheter and CVP monitoring

Question 204

MODS (Multiple Organ Dysfunction Syndrome) involves:

- A. Failure of one organ
- B. Coagulopathy alone
- C. Infection with 3 or more organisms
- D. Progressive failure of ≥ 2 organ systems - typically respiratory first, then renal, hepatic, cardiovascular, CNS

Question 205

SIRS criteria (2 of 4 required) include:

- A. Fever, leukocytosis, tachycardia, tachypnea - 2 of these 4
- B. Positive culture, fever, altered mental status
- C. BP < 90 , HR > 100 , RR > 20
- D. Lactate > 2 , fever, infection source

Question 206

The qSOFA score for screening sepsis in non-ICU settings uses:

- A. BP, WBC, temperature
- B. Altered mental status, RR ≥ 22 , SBP ≤ 100 mmHg (score ≥ 2 = high suspicion for sepsis)
- C. Lactate, HR, BP
- D. GCS, temperature, WBC

Question 207

Burns: Rule of Nines assigns the ENTIRE anterior trunk as:

- A. 9%
- B. 27%
- C. 18%
- D. 36%

Question 208

Carbon monoxide poisoning is treated with:

- A. Hydroxocobalamin only for CO
- B. Low-flow oxygen
- C. Sodium thiosulfate
- D. 100% oxygen via non-rebreather mask (NRB) or intubation; consider hyperbaric O₂

Question 209

In a patient with anaphylactic shock, the FIRST-line drug is:

- A. Epinephrine 0.3-0.5 mg IM (anterolateral thigh)
- B. Diphenhydramine IV
- C. Corticosteroids
- D. Normal saline bolus only

Question 210

Hypovolemic shock classification: Class III represents blood loss of approximately:

- A. <750 mL
- B. 1500-2000 mL (30-40% blood volume, significant hemodynamic changes)
- C. 750-1500 mL
- D. <15% blood volume

Question 211

Distributive shock is characterized by:

- A. High SVR, low CO
- B. Low SVR (vasodilation), high or normal CO - includes septic, neurogenic, anaphylactic
- C. High CVP, low CO
- D. Low CO, high SVR, cold extremities

Question 212

Obstructive shock causes include:

- A. Hypovolemia
- B. Anaphylaxis
- C. Myocardial infarction
- D. Tension pneumothorax, cardiac tamponade, massive PE - mechanical obstruction to flow

Question 213

Beck's Triad (cardiac tamponade) includes:

- A. Hypertension, bradycardia, JVD
- B. Hypotension, muffled heart sounds, jugular venous distension (JVD)
- C. Tachycardia, fever, chest pain
- D. Cyanosis, tachypnea, decreased SpO2

Question 214

Pulsus paradoxus is MOST associated with:

- A. Aortic stenosis
- B. Cardiac tamponade (>10 mmHg drop in SBP during inspiration)
- C. Mitral regurgitation
- D. Hypertensive crisis

Question 215

Damage control resuscitation in massive hemorrhage uses:

- A. Only crystalloid fluids in large volumes
- B. Normal saline 3L bolus
- C. Balanced blood product ratio (1:1:1 - PRBCs:FFP:Platelets) plus TXA
- D. Colloids first, blood products second

Question 216

Massive transfusion is defined as:

- A. >5 units in 24 hrs
- B. 2 units in 1 hour
- C. Any transfusion in ICU
- D. ≥ 10 units PRBCs within 24 hrs or replacement of entire blood volume in 24 hrs

Question 217

The Braden Scale assesses:

- A. Pressure injury risk (sensory perception, moisture, activity, mobility, nutrition, friction)
- B. Risk for deep vein thrombosis
- C. Severity of sepsis
- D. Risk of falls

Question 218

Which intervention is PRIORITY in preventing pressure injuries in critically ill patients?

- A. Frequent wound debridement
- B. Regular repositioning every 2 hours, skin assessment, pressure-relieving surfaces
- C. Nutritional supplementation only
- D. Use of barrier cream only

Question 219

PICS (Post-Intensive Care Syndrome) refers to:

- A. Infection acquired in the ICU
- B. A specific post-discharge infection
- C. Physical, cognitive, and mental health impairments after critical illness
- D. PTSD in healthcare providers

Question 220

Eclampsia is differentiated from severe preeclampsia by:

- A. Higher BP readings
- B. HELLP syndrome only
- C. Presence of proteinuria
- D. Onset of grand mal seizures in a woman with preeclampsia

Question 221

HELLP syndrome stands for:

- A. Hemolysis, Elevated Liver enzymes, Low Platelets
- B. Heart failure, Elevated LFTs, Low Potassium
- C. Hypertension, Edema, Liver dysfunction, Low Protein
- D. Hemolysis, Elevated Lipids, Low Phosphate

Question 222

Magnesium sulfate in eclampsia is used to:

- A. Lower blood pressure
- B. Prevent and treat seizures
- C. Promote fetal lung maturity
- D. Treat HELLP syndrome coagulopathy

Question 223

Toxicity from magnesium sulfate is FIRST manifested by:

- A. Respiratory arrest
- B. Bradycardia
- C. Loss of deep tendon reflexes (DTRs), then respiratory depression
- D. Pupil dilation

Question 224

Antidote for magnesium toxicity:

- A. Sodium bicarbonate
- B. Flumazenil
- C. Naloxone
- D. Calcium gluconate IV

Question 225

A patient with obesity presents with hypoxia, hypercapnia, and polycythemia. The likely diagnosis is:

- A. Obesity Hypoventilation Syndrome (OHS) / Pickwickian syndrome
- B. ARDS
- C. Pulmonary embolism
- D. COPD exacerbation

Question 226

Acute adrenal insufficiency precipitated by stopping chronic steroids is treated with:

- A. Oral prednisone only
- B. IV hydrocortisone 100 mg bolus, then every 6-8 hours
- C. Dexamethasone alone
- D. Mineralocorticoid only

Question 227

In septic shock, the target MAP is:

- A. ≥ 60 mmHg
- B. ≥ 70 mmHg
- C. ≥ 65 mmHg
- D. ≥ 80 mmHg in patients with prior hypertension

Question 228

Point-of-care ultrasound (POCUS) in critical care is used for:

- A. Only cardiac evaluation
- B. Only DVT screening
- C. Only vascular access
- D. Cardiac, lung, vascular (IVC for volume status), abdominal assessment at bedside

Question 229

A patient with severe sepsis has lactate of 5.0 mmol/L after 2 hours. This indicates:

- A. Persistent tissue hypoperfusion - escalate treatment
- B. Adequate resuscitation
- C. Normal physiological response
- D. Only elevation due to liver failure

Question 230

Procalcitonin is used in critical care to:

- A. Diagnose all infections
- B. Guide antibiotic therapy - rises with bacterial infection; declining levels may support antibiotic de-escalation
- C. Monitor renal function
- D. Assess fluid status

Question 231

Ventilator-associated events (VAEs) are BEST prevented by:

- A. Increasing sedation to prevent patient movement
- B. Using high PEEP settings
- C. Implementing VAP bundle + SAT + SBT + early mobility
- D. Routine bronchoscopy

Question 232

A patient develops fever, rash, and eosinophilia 2 weeks after antibiotic initiation. MOST likely:

- A. New infection
- B. Sepsis
- C. Allergic reaction to IV fluids
- D. Drug reaction with eosinophilia and systemic symptoms (DRESS syndrome)

Question 233

Toxic shock syndrome (TSS) is caused by:

- A. Staphylococcus aureus or Streptococcal superantigens - massive cytokine release
- B. Gram-negative bacteria
- C. Viral infection
- D. Candida sepsis

Question 234

Pain management in critically ill patients should follow the:

- A. Sedation-first approach
- B. Pain, Agitation, Delirium (PAD) guidelines - analgesia FIRST, then sedation
- C. Routine PRN morphine only
- D. No opioids in ICU

Question 235

A 'pain-first' or 'analgo-sedation' approach in ICU means:

- A. Using only non-pharmacological methods
- B. Sedating first to achieve analgesia
- C. Treating pain with analgesics before adding sedatives
- D. Avoiding opioids entirely

Question 236

Tranexamic acid (TXA) is used in trauma for:

- A. Preventing infection
- B. Reversing anticoagulants
- C. Treating coagulopathy after transfusion
- D. Reducing mortality from hemorrhage when given within 3 hours of injury

Question 237

Early enteral nutrition in critical illness is associated with:

- A. Reduced gut mucosal atrophy, maintained immune function, reduced infection
- B. Increased infection risk
- C. Worsening hyperglycemia
- D. Increased aspiration only

Question 238

Healthcare-associated infections (HAIs) are BEST prevented by:

- A. Prophylactic antibiotics for all ICU patients
- B. Hand hygiene, standard/transmission-based precautions, bundle compliance
- C. Strict visitor restrictions
- D. Routine air cultures

Question 239

A patient with end-stage heart failure expresses desire to stop all interventions. The nurse's PRIORITY:

- A. Attempt to change patient's decision
- B. Continue all treatments until physician orders change
- C. Facilitate goals-of-care discussion, notify the physician, contact palliative care, and document
- D. Notify hospital ethics committee before respecting any decision

Question 240

Palliative care in ICU is characterized by:

- A. Withdrawing all care and providing only comfort
- B. Limited to end-of-life situations only
- C. Hospice care only
- D. Focusing on quality of life and symptom management - can be provided alongside curative treatment

Question 241

Which type of shock presents with HIGH cardiac output and LOW SVR?

- A. Distributive shock (septic, anaphylactic, neurogenic)
- B. Hypovolemic shock
- C. Cardiogenic shock
- D. Obstructive shock

Question 242

Submersion injury (near-drowning) requires observation for how long?

- A. 1 hour if asymptomatic
- B. At least 6-8 hours - delayed ARDS possible
- C. 4 hours only if freshwater
- D. Only if unconscious on arrival

Question 243

A trauma patient has increasing abdominal girth, hypotension, and absent bowel sounds after blunt abdominal trauma. PRIORITY:

- A. NG tube insertion
- B. IV fluid resuscitation and observation only
- C. Emergent surgical consult - suspected intraperitoneal hemorrhage
- D. CT scan of head

Question 244

Hypothermia (core temperature <35 degrees C) in a trauma patient causes:

- A. Improved coagulation
- B. Better tissue oxygenation
- C. Increased heart rate and vasoconstriction
- D. The 'lethal triad': hypothermia, acidosis, coagulopathy - worsens outcomes

Question 245

Systemic inflammatory response syndrome (SIRS) without infection is called:

- A. Non-infectious SIRS (e.g., pancreatitis, burns, trauma)
- B. Sepsis
- C. Septic shock
- D. Bacteremia

Question 246

Proning in ARDS is indicated when P/F ratio is:

- A. >300
- B. <150 (severe ARDS - benefit shown with P/F <150 in PROSEVA trial)
- C. <200
- D. <250

Question 247

What is the MOST sensitive early sign of deterioration in a critically ill patient?

- A. Falling blood pressure
- B. Increasing temperature
- C. Change in level of consciousness / mental status change
- D. Falling SpO₂

Question 248

A patient with suspected CO poisoning has SpO₂ 98% by pulse oximetry. The nurse knows:

- A. SpO₂ confirms no CO poisoning
- B. SpO₂ 98% rules out respiratory compromise
- C. Patient is stable and no intervention needed
- D. Pulse oximetry CANNOT distinguish COHb from OxyHb - ABG with co-oximetry is required

Question 249

Thermoregulatory failure in heat stroke requires PRIORITY intervention of:

- A. Rapid cooling measures (ice packs, cool IV fluids, evaporative cooling) - antipyretics ineffective in heat stroke
- B. Antipyretics (acetaminophen/NSAIDs)
- C. Antibiotics for presumed sepsis
- D. IV fluid restriction

Question 250

Failure to thrive in the ICU patient is BEST addressed by:

- A. Increasing sedation
- B. Comprehensive assessment: nutrition, mobility, palliative care needs, psychological support, social work
- C. Reducing family visitation
- D. Stopping all non-essential medications

Question 251

The Synergy Model for Patient Care was developed by:

- A. American Nurses Association (ANA)
- B. JCAHO
- C. AACN (American Association of Critical-Care Nurses)
- D. CMS

Question 252

In the Synergy Model, patient characteristics include:

- A. Clinical judgment and advocacy
- B. Age, gender, diagnosis only
- C. Only physiological status
- D. Resiliency, vulnerability, stability, complexity, resource availability, participation in care, participation in decision-making, predictability

Question 253

In the Synergy Model, 'resiliency' refers to:

- A. Patient's ability to bounce back from illness or adversity
- B. Number of support systems
- C. Physiological stability
- D. Patient's predictability

Question 254

'Vulnerability' as a patient characteristic in the Synergy Model means:

- A. Emotional state
- B. Susceptibility to actual or potential stressors that may adversely affect patient outcomes
- C. Ability to participate in decisions
- D. Social support resources

Question 255

The nurse competency of 'Clinical Judgment' in the Synergy Model involves:

- A. Following physician orders accurately
- B. Teaching the patient
- C. Clinical reasoning including assessment, pattern recognition, decision-making, and evaluation based on knowledge and experience
- D. Coordinating care with other disciplines

Question 256

'Facilitation of Learning' in the Synergy Model is best demonstrated when a nurse:

- A. Gives a medication correctly
- B. Collaborates with the physician
- C. Completes required paperwork
- D. Teaches a patient and family about their diagnosis, treatment, and self-care before discharge

Question 257

'Advocacy/Moral Agency' competency in the Synergy Model means the nurse:

- A. Acts on behalf of patient interests, serves as a moral agent, and navigates ethical conflicts
- B. Avoids conflict at all costs
- C. Follows policies without question
- D. Avoids discussing ethical issues with families

Question 258

A patient's family requests continued aggressive treatment for a brain-dead patient. The nurse's BEST response is:

- A. Immediately withdraw all care per nurse's judgment
- B. Facilitate a family meeting with the physician and palliative care to explore goals and provide information
- C. Tell the family the patient is dead and there is nothing to discuss
- D. Document refusal and do nothing

Question 259

Informed consent requires:

- A. Patient signature only
- B. Physician decision only
- C. Patient information about the procedure/risks/benefits/alternatives, voluntary agreement, and decision-making capacity
- D. Family permission for all adults

Question 260

A patient has a DNR order. They develop an arrhythmia. The nurse should:

- A. Initiate CPR - DNR does not apply to arrhythmias
- B. Ask family before doing anything
- C. Defibrillate and administer ACLS drugs
- D. Continue monitoring and comfort care per order - DNR means no CPR/resuscitation

Question 261

'Collaboration' in the Synergy Model involves:

- A. Working with interdisciplinary team, patient, and family to achieve optimal patient outcomes
- B. Working independently without consulting the team
- C. Only nursing team collaboration
- D. Deferring all decisions to physicians

Question 262

'Systems Thinking' competency means the nurse:

- A. Understands only their unit's workflow
- B. Sees the patient in the context of the entire healthcare system, identifies resources, navigates the system for patient benefit
- C. Follows the chain of command only
- D. Manages the ICU budget

Question 263

'Response to Diversity' competency requires the nurse to:

- A. Treat all patients the same regardless of differences
- B. Follow only hospital protocols
- C. Recognize and incorporate differences (cultural, spiritual, gender, lifestyle) into individualized care plans
- D. Ask all patients about their religion only

Question 264

'Clinical Inquiry' competency is BEST exemplified by a nurse who:

- A. Only reads hospital policies
- B. Delegates all clinical decisions
- C. Avoids challenging the status quo
- D. Questions current practice, seeks evidence, participates in research, and integrates new knowledge

Question 265

A patient with terminal diagnosis refuses further treatment. The nurse's ETHICAL obligation is:

- A. Respect patient autonomy - ensure the decision is informed and competent, document, and provide comfort care
- B. Override patient refusal for their own good
- C. Contact ethics committee before any action
- D. Inform family and let them decide

Question 266

The principle of 'non-maleficence' in nursing ethics means:

- A. Do good for the patient
- B. Do no harm - avoid actions that cause unnecessary harm or injury
- C. Distribute resources fairly
- D. Respect patient's right to make decisions

Question 267

The principle of 'beneficence' means:

- A. Avoiding harm
- B. Acting in the best interest of the patient - promoting well-being
- C. Fairness in resource distribution
- D. Truthfulness with the patient

Question 268

Justice in healthcare ethics refers to:

- A. Following hospital policy
- B. Non-maleficence
- C. Patient autonomy
- D. Fair and equitable distribution of resources and care without discrimination

Question 269

A nurse witnesses a colleague administering medication without verifying the 5 rights. The ETHICAL action is:

- A. Address the situation directly with the colleague, report per facility policy - patient safety first
- B. Ignore it to avoid conflict
- C. Wait to see if harm results before reporting
- D. Report to the charge nurse only if harm occurs

Question 270

A patient's surrogate decision-maker is refusing a blood transfusion for an unconscious critically ill patient. The ethical framework the nurse should apply is:

- A. Beneficence only - transfuse without consent
- B. Substituted judgment - what would the patient have wanted? Consult ethics committee
- C. Paternalism - doctor decides best
- D. Follow family without question

Question 271

'Caring practices' in the Synergy Model focuses on:

- A. Technical skills only
- B. Administering medications correctly
- C. Creating a compassionate, supportive, therapeutic environment that promotes healing and dignity
- D. Following strict policies

Question 272

AACN's Healthy Work Environment (HWE) standards include:

- A. Mandatory overtime and strict hierarchy
- B. Nurse-to-patient ratios set by administration only
- C. Silent nursing units
- D. Skilled communication, true collaboration, effective decision-making, meaningful recognition, authentic leadership, appropriate staffing

Question 273

Moral distress in critical care nurses occurs when:

- A. They know the right action but are constrained from taking it (institutional, authority, or situation barriers)
- B. They disagree with a patient's lifestyle choices
- C. They feel overworked
- D. They dislike their colleagues

Question 274

Which action demonstrates the nurse's role as a patient advocate?

- A. Following all physician orders without question
- B. Questioning an order that seems inappropriate and voicing concerns through proper channels
- C. Asking the family for permission for all interventions
- D. Documenting everything but taking no action

Question 275

End-of-life care: withdrawing life-sustaining treatment is:

- A. Never ethically acceptable
- B. Ethically and legally acceptable when it represents the patient's informed wishes or best interests
- C. Only acceptable with court order
- D. Only acceptable when all family members agree

Question 276

POLST (Physician Orders for Life-Sustaining Treatment) differs from advance directives because:

- A. It is a legal document only
- B. It requires an attorney
- C. It only applies in hospitals
- D. POLST is a set of actual medical orders - immediately actionable across care settings

Question 277

A patient asks the nurse not to disclose their diagnosis to their family. The nurse should:

- A. Respect the patient's confidentiality - do not disclose to family without patient consent (HIPAA)
- B. Tell the family anyway - they have a right to know
- C. Document and inform only the charge nurse
- D. Advise patient that family must be told

Question 278

Critical care nurses experience 'compassion fatigue' due to:

- A. Lack of clinical knowledge
- B. Repeated exposure to suffering and trauma in the absence of adequate support
- C. Too many administrative tasks
- D. Excessive continuing education requirements

Question 279

A family demands CPR for a patient the physician has declared medically futile. The BEST nursing action is:

- A. Perform CPR per family request without physician order
- B. Inform the family CPR will cause harm and refuse
- C. Arrange a family meeting with the interdisciplinary team, chaplain, and ethics committee to address goals of care
- D. Document and ignore family request

Question 280

Cultural competence in critical care requires the nurse to:

- A. Learn only the most common cultural practices
- B. Avoid cultural discussions to prevent conflict
- C. Provide the same care regardless of cultural needs
- D. Approach each patient's cultural and spiritual beliefs with humility, curiosity, and respect - ask rather than assume

Question 281

A nurse overhears a colleague making derogatory comments about a patient. The nurse's FIRST action:

- A. Intervene directly if safe to do so; report per facility peer accountability processes
- B. Ignore it - not their responsibility
- C. Wait until the end of shift
- D. Apologize to the patient on the colleague's behalf

Question 282

Organ donation conversation with a family of a brain-dead patient is BEST handled by:

- A. The bedside nurse alone
- B. A trained organ procurement organization (OPO) coordinator, ideally with nursing support
- C. The attending physician only
- D. Social work only

Question 283

A nurse documents 'patient fell from bed' but witnessed the patient being dropped by a staff member. This is:

- A. Acceptable shorthand documentation
- B. Appropriate to protect the colleague
- C. Inaccurate documentation - a form of falsification; the nurse must document what actually occurred
- D. Acceptable if no harm resulted

Question 284

Restorative care practices in ICU include:

- A. Continuous sedation and restraints
- B. Limiting family to 1 visitor per day
- C. High-dose opioid infusions
- D. Spontaneous awakening trials, early mobility, sleep promotion, cognitive stimulation, family engagement

Question 285

Which factor MOST negatively impacts quality of death and dying in the ICU?

- A. Poor communication, uncontrolled pain, lack of patient-centered goals of care discussion
- B. Family involvement in care
- C. Adequate nursing staff
- D. Palliative care involvement

Question 286

The nurse's role in evidence-based practice (EBP) includes:

- A. Implementing only what the physician orders
- B. Questioning current practices, seeking research evidence, advocating for change based on best evidence
- C. Following hospital protocols without review
- D. Only participating in formal research studies

Question 287

Which statement about ICU family visitation is supported by current evidence?

- A. Restricted visiting hours improve patient outcomes
- B. Families should only visit after clinical rounds
- C. Unrestricted/flexible family visitation reduces patient anxiety, delirium, and improves family satisfaction
- D. No evidence supports family visitation in ICU

Question 288

A nurse assesses that a patient appears to be experiencing uncontrolled pain despite receiving ordered analgesics. BEST action:

- A. Wait until the next scheduled dose
- B. Document only
- C. Administer an additional dose without order
- D. Reassess pain using validated tool, notify physician, request order adjustment per protocol

Question 289

'Predictability' as a patient characteristic in the Synergy Model means:

- A. Summative expectedness of the course of illness - how predictable the trajectory is
- B. Patient's likelihood to survive
- C. Patient's adherence to treatment
- D. Stability of vital signs

Question 290

A nurse is caring for a patient who speaks only Spanish. BEST practice is:

- A. Use a family member or untrained staff to translate
- B. Use a trained medical interpreter (in-person or via phone/video) - ensures accuracy and confidentiality
- C. Speak louder and use gestures
- D. Provide written materials in English

Question 291

The SBAR communication tool stands for:

- A. Situation, Behavior, Action, Results
- B. Screening, Background, Assessment, Reporting
- C. Situation, Background, Assessment, Recommendation
- D. Safety, Background, Alert, Response

Question 292

Closed-loop communication in critical care means:

- A. Communicating only by written orders
- B. Using only electronic communication
- C. Avoiding verbal handoffs
- D. Sender gives message -> receiver repeats back -> sender confirms - reduces errors

Question 293

A patient has capacity to make decisions if they demonstrate:

- A. Understanding of the situation, appreciation of consequences, ability to reason, and communicate a choice
- B. Agreement with the medical team's recommendation
- C. Being alert and oriented x 4
- D. No psychiatric history

Question 294

Which action BEST represents the nurse applying 'Clinical Inquiry' competency?

- A. Following the current VAP bundle without question
- B. Reviewing current evidence on oral care for ventilated patients and proposing a protocol update based on new research
- C. Completing all required nursing tasks
- D. Administering medications as ordered

Question 295

An ICU nurse is asked to care for 6 patients simultaneously during a critical staffing shortage. The nurse's PRIORITY action:

- A. Accept the assignment without comment
- B. Refuse to care for any patients
- C. Escalate concern to charge nurse/supervisor; document unsafe staffing; follow facility policy - patient and nurse safety are paramount
- D. Accept and do the best possible without escalating

Question 296

A patient who has been in the ICU for 3 weeks with ARDS is showing signs of depression and hopelessness. The nurse's BEST intervention:

- A. Refer to psychiatry and do nothing further
- B. Document observations and wait for physician order
- C. Increase sedation to reduce distress
- D. Engage patient in therapeutic conversation, facilitate chaplain/counseling referral, promote autonomy and participation in care, involve family

Question 297

Which describes the 'complexity' patient characteristic in the Synergy Model?

- A. The intricate entanglement of two or more systems - physiological, family, community - requiring intensive nursing care
- B. Only the number of diagnoses
- C. Physical illness severity only
- D. The number of medications

Question 298

Nurse fatigue in the ICU is associated with increased risk of:

- A. Improved patient outcomes
- B. Medication errors, needlestick injuries, and reduced critical thinking
- C. Better team communication
- D. Higher job satisfaction

Question 299

A patient's healthcare power of attorney (HCPOA) states 'no heroic measures.' The patient is now intubated per family request against the written directive. The nurse's action is:

- A. Accept the current situation
- B. Continue care as is without escalation
- C. Escalate per facility policy - notify charge nurse, physician, and risk management; request ethics consultation
- D. Document only

Question 300

The concept of 'resource availability' in the Synergy Model refers to:

- A. Hospital budget
- B. Extent of resources the patient/family brings to the situation (social support, financial, knowledge, health literacy, community)
- C. Available nursing staff
- D. Medical technology available

Question 301

Which action demonstrates authentic leadership in the ICU?

- A. Self-awareness, transparent communication, building trust, empowering staff, and advocating for healthy work environments
- B. Making unilateral decisions without staff input
- C. Following only administration directives
- D. Maintaining hierarchy without feedback

Question 302

A critically ill patient's daughter states: 'My father always said he never wanted to be on machines.' This is an example of:

- A. Legal advance directive
- B. Verbal advance directive - oral expression of wishes that should be documented and honored
- C. Not legally binding - ignore it
- D. An expression that requires notarization

Question 303

Truth-telling (veracity) in nursing ethics requires:

- A. Telling patients only what will not upset them
- B. Deferring to the physician for all information sharing
- C. Providing honest, accurate information to patients and families, even when difficult
- D. Avoiding prognosis discussions with families

Question 304

Which intervention BEST supports family members of a dying ICU patient?

- A. Limiting their time at the bedside to reduce disruption
- B. Providing written information only
- C. Only allowing visits after clinical rounds
- D. Welcoming family presence, providing regular updates, offering chaplain support, preparing them for the dying process

Question 305

A nurse disagrees with a physician's order for a patient but it is not an emergency. The BEST action is:

- A. Use the chain of command: discuss concern with the physician, document, escalate to charge nurse or supervisor if unresolved
- B. Follow the order without comment
- C. Refuse to carry out any order in question
- D. Document only and take no action

Question 306

Which factor MOST contributes to medical errors in the ICU?

- A. Experienced nursing staff
- B. Communication failures, high workload, fatigue, complex patients, inadequate handoffs
- C. Modern technology
- D. Evidence-based protocols

Question 307

'Meaningful recognition' as part of Healthy Work Environment standards means:

- A. Annual performance reviews only
- B. Mandatory staff awards ceremonies
- C. Acknowledging contributions of nurses and colleagues in a timely, authentic way that reinforces their value
- D. Financial bonuses only

Question 308

An ICU nurse notices a breakdown in teamwork during a code. Afterward, the BEST action is:

- A. Ignore it - codes are stressful
- B. Write an incident report without team discussion
- C. Complain to charge nurse only
- D. Request a structured debriefing with the team to identify breakdowns, reinforce what worked, and improve future performance

Question 309

The ethical principle MOST challenged by resource scarcity during a crisis standard of care is:

- A. Justice - fair allocation of scarce resources among patients with competing needs
- B. Beneficence
- C. Non-maleficence
- D. Autonomy

Question 310

A nurse caring for a patient who is being kept alive against stated wishes experiences intense moral distress. The BEST organizational response is:

- A. Tell the nurse to follow orders
- B. Provide ethics consultation, peer support, palliative care involvement, and facilitate a structured goals-of-care conversation
- C. Transfer the patient to another unit
- D. Document the disagreement and do nothing further

ANSWER KEY AND RATIONALES

Detailed Explanations

Quick reference key for all 310 items, followed by full rationales and notes on less appropriate choices.

Quick Answer Key

1. C	2. B	3. B	4. C	5. A	6. A
7. B	8. D	9. C	10. C	11. C	12. C
13. C	14. B	15. A	16. D	17. A	18. B
19. C	20. C	21. A	22. C	23. D	24. C
25. A	26. C	27. B	28. D	29. A	30. C
31. C	32. D	33. A	34. C	35. B	36. D
37. C	38. B	39. C	40. C	41. A	42. B
43. C	44. D	45. C	46. C	47. B	48. C
49. A	50. C	51. C	52. A	53. A	54. B
55. B	56. C	57. A	58. B	59. C	60. A
61. A	62. B	63. C	64. D	65. A	66. B
67. B	68. A	69. A	70. C	71. C	72. D
73. A	74. B	75. B	76. D	77. D	78. B
79. C	80. D	81. A	82. B	83. C	84. D
85. A	86. B	87. C	88. D	89. A	90. B
91. C	92. D	93. A	94. B	95. C	96. D
97. A	98. B	99. C	100. D	101. A	102. B
103. C	104. D	105. A	106. B	107. C	108. D
109. A	110. B	111. C	112. D	113. A	114. B
115. C	116. D	117. A	118. B	119. C	120. D
121. A	122. B	123. C	124. D	125. A	126. B
127. C	128. D	129. A	130. B	131. B	132. D
133. A	134. B	135. C	136. D	137. A	138. B
139. C	140. D	141. A	142. B	143. C	144. D
145. A	146. B	147. C	148. D	149. A	150. B
151. C	152. B	153. A	154. B	155. C	156. D
157. A	158. B	159. C	160. D	161. A	162. B
163. C	164. D	165. A	166. B	167. C	168. D
169. A	170. B	171. C	172. D	173. A	174. B
175. C	176. D	177. A	178. B	179. C	180. D
181. A	182. B	183. C	184. D	185. A	186. B
187. C	188. D	189. B	190. B	191. C	192. D
193. A	194. B	195. C	196. D	197. A	198. B
199. C	200. D	201. A	202. B	203. C	204. D
205. A	206. B	207. C	208. D	209. A	210. B

211. B	212. D	213. B	214. B	215. C	216. D
217. A	218. B	219. C	220. D	221. A	222. B
223. C	224. D	225. A	226. B	227. C	228. D
229. A	230. B	231. C	232. D	233. A	234. B
235. C	236. D	237. A	238. B	239. C	240. D
241. A	242. B	243. C	244. D	245. A	246. B
247. C	248. D	249. A	250. B	251. C	252. D
253. A	254. B	255. C	256. D	257. A	258. B
259. C	260. D	261. A	262. B	263. C	264. D
265. A	266. B	267. B	268. D	269. A	270. B
271. C	272. D	273. A	274. B	275. B	276. D
277. A	278. B	279. C	280. D	281. A	282. B
283. C	284. D	285. A	286. B	287. C	288. D
289. A	290. B	291. C	292. D	293. A	294. B
295. C	296. D	297. A	298. B	299. C	300. B
301. A	302. B	303. C	304. D	305. A	306. B
307. C	308. D	309. A	310. B		

Full Rationales

Question 1 • Correct Answer: C

A patient with STEMI arrives to the ED. What is the optimal door-to-balloon time?

Current ACC/AHA STEMI guidelines set a door-to-balloon (first medical contact-to-device) goal of <90 minutes for primary PCI at a PCI-capable hospital.

Why the other choices are less appropriate:

- A. <60 min is an aspirational/quality target for some systems but not the guideline standard.
- B. <30 min applies to fibrinolytic (door-to-needle), not balloon.
- D. <120 min is the goal only when transferring to a PCI center, not the primary standard.

Question 2 • Correct Answer: B

Which hemodynamic profile is consistent with cardiogenic shock?

Cardiogenic shock reflects pump failure: elevated PCWP from LV backup, low cardiac output, and high SVR from compensatory vasoconstriction.

Why the other choices are less appropriate:

- A. Low PCWP with low SVR fits distributive or hypovolemic states.
- C. Low PCWP, high CO, low SVR is classic distributive (septic) shock.
- D. High CO does not occur in pump failure.

Question 3 • Correct Answer: B

A patient develops sudden hypotension, muffled heart sounds, and JVD after a stab wound to the chest. The priority intervention is:

Hypotension, muffled heart sounds, and JVD (Beck's triad) after penetrating chest trauma indicate cardiac tamponade; emergency pericardiocentesis (or surgical evacuation) relieves the obstruction.

Why the other choices are less appropriate:

- A. Intubation does not address the pericardial fluid causing obstructive shock.
- C. A fluid bolus is a temporizing measure but not the definitive priority.
- D. A chest tube treats pneumothorax/hemothorax, not tamponade.

Question 4 • Correct Answer: C

Which arrhythmia is CONTRAINDICATED for treatment with adenosine?

Adenosine blocks the AV node and can precipitate rapid conduction down the accessory pathway in WPW (especially with atrial fibrillation), risking VF; it is contraindicated.

Why the other choices are less appropriate:

- A. SVT is the primary indication for adenosine.
- B. Sinus tachycardia is not harmed by adenosine (though not therapeutic).
- D. Adenosine may transiently unmask atrial flutter but is not dangerous like WPW.

Question 5 • Correct Answer: A

A patient receiving heparin post-CABG develops a platelet count drop from 220,000 to 95,000 on day 7. The MOST appropriate action is:

A >50% platelet drop around day 5-10 of heparin is classic for heparin-induced thrombocytopenia (HIT); stop all heparin and start a non-heparin anticoagulant such as argatroban due to prothrombotic risk.

Why the other choices are less appropriate:

- B. Increasing heparin worsens HIT and thrombosis risk.
- C. Platelet transfusion is generally avoided in HIT and can fuel thrombosis.
- D. Adding aspirin and waiting delays life-saving anticoagulation.

Question 6 • Correct Answer: A

The normal range for cardiac index (CI) is:

Normal cardiac index is approximately 2.4-4.0 L/min/m².

Why the other choices are less appropriate:

- B. 1.0-2.0 is markedly low, seen in cardiogenic shock.
- C. 4.0-6.0 exceeds the normal range.
- D. 0.8-1.5 is profoundly low output.

Question 7 • Correct Answer: B

Torsades de Pointes is BEST treated with:

Torsades de pointes (polymorphic VT with prolonged QT) is treated with IV magnesium sulfate regardless of magnesium level.

Why the other choices are less appropriate:

- A. Amiodarone prolongs QT and can worsen torsades.
- C. Lidocaine is not first-line for torsades.
- D. Cardioversion/defibrillation is used if pulseless or unstable, but magnesium is the specific pharmacologic treatment.

Question 8 • Correct Answer: D

An aortic dissection Type A is defined by:

Stanford Type A dissection involves the ascending aorta and is a surgical emergency.

Why the other choices are less appropriate:

- A. Descending-only involvement is Type B.
- B. Isolated arch involvement is not the definition of Type A.
- C. Involvement below the renal arteries is not how Type A is defined.

Question 9 • Correct Answer: C

A patient with heart failure has a PCWP of 22 mmHg and CI of 1.8 L/min/m. Which agent is MOST appropriate?

High PCWP (22) with low CI (1.8) indicates decompensated heart failure/low-output state with adequate filling; dobutamine, a beta-1 inotrope, augments contractility and cardiac output.

Why the other choices are less appropriate:

- A. Phenylephrine raises afterload and further reduces output.
- B. Norepinephrine is a pressor, not the primary inotrope for this profile if perfusion pressure is maintained.
- D. Vasopressin is a vasoconstrictor, not an inotrope.

Question 10 · Correct Answer: C

The IABP inflates during which phase of the cardiac cycle?

The intra-aortic balloon pump inflates at the onset of diastole (dicrotic notch) to augment coronary perfusion.

Why the other choices are less appropriate:

- A. Inflation during systole would obstruct ejection.
- B. Late diastole timing is incorrect; it deflates just before systole.
- D. Isovolumetric contraction is systolic timing.

Question 11 · Correct Answer: C

Which ECG finding is MOST associated with hyperkalemia?

Peaked (tented) T waves are the earliest classic ECG change of hyperkalemia.

Why the other choices are less appropriate:

- A. Prolonged QT is seen with hypocalcemia or drugs.
- B. Delta waves indicate WPW pre-excitation.
- D. U waves are associated with hypokalemia.

Question 12 · Correct Answer: C

A patient with third-degree heart block is hypotensive with HR 32. The initial treatment is:

Symptomatic third-degree AV block with bradycardia and hypotension is treated with atropine while preparing transcutaneous pacing (and considering dopamine/epinephrine).

Why the other choices are less appropriate:

- A. Adenosine slows the AV node and worsens block.
- B. Amiodarone is not indicated for bradycardic block.
- D. Defibrillation is for VF/pulseless VT, not bradycardia.

Question 13 · Correct Answer: C

Which vasopressor is FIRST-LINE in septic shock according to Surviving Sepsis Guidelines?

The Surviving Sepsis Campaign designates norepinephrine as the first-line vasopressor in septic shock.

Why the other choices are less appropriate:

- A. Epinephrine is added when norepinephrine is inadequate.
- B. Dopamine is no longer preferred due to arrhythmia risk.
- D. Phenylephrine is a later alternative, not first-line.

Question 14 · Correct Answer: B

Pulsus paradoxus is defined as:

Pulsus paradoxus is an exaggerated fall in systolic BP of >10 mmHg during inspiration, classically seen in tamponade.

Why the other choices are less appropriate:

- A. BP rises, not falls, is incorrect direction.
- C. It refers to systolic pressure with inspiration, not diastolic on expiration.
- D. It is a blood pressure, not heart rate, phenomenon.

Question 15 · Correct Answer: A

A patient on an IABP has an augmentation ratio of 1:2. This means:

A 1:2 augmentation ratio means the balloon assists (inflates) every second heartbeat.

Why the other choices are less appropriate:

- B. The balloon inflates once per assisted beat, not twice.
- C. It describes assistance frequency, not deflation pattern.
- D. It refers to the assist ratio, not heart rate.

Question 16 · Correct Answer: D

Which of the following is an absolute contraindication to IABP therapy?

Significant aortic regurgitation is an absolute contraindication to IABP because diastolic inflation worsens regurgitant flow into the LV.

Why the other choices are less appropriate:

- A. Recent MI is an indication, not a contraindication.
- B. Stable angina is not a contraindication.
- C. Cardiomyopathy is not an absolute contraindication.

Question 17 · Correct Answer: A

A patient with known Wolff-Parkinson-White develops rapid AF with a rate of 180. Which drug should be AVOIDED?

In WPW with rapid AF, AV nodal blockers like adenosine can accelerate conduction down the accessory pathway and precipitate VF, so adenosine should be avoided.

Why the other choices are less appropriate:

- B. Procainamide is preferred as it slows accessory pathway conduction.
- C. Ibutilide is acceptable in pre-excited AF.
- D. Synchronized cardioversion is the treatment of choice if unstable.

Question 18 · Correct Answer: B

Normal SVR range is:

Normal systemic vascular resistance is approximately 800-1200 dynes/sec/cm-5.

Why the other choices are less appropriate:

- A. 400-600 is markedly low (vasodilated/distributive).
- C. 1400-1800 is elevated.
- D. 200-400 is profoundly low.

Question 19 · Correct Answer: C

Post-CABG a patient develops chest tube output of 250 mL over 1 hour. The nurse's PRIORITY action is:

Chest tube output of >200 mL/hr after cardiac surgery signals surgical bleeding; the surgeon must be notified immediately for possible re-exploration.

Why the other choices are less appropriate:

- A. Protamine may be ordered but is not the nurse's independent priority action.
- B. Fluid replacement does not address the source of hemorrhage.
- D. The chest tube should never be clamped/removed with active bleeding.

Question 20 · Correct Answer: C

A patient develops ST elevation in leads II, III, and aVF. Which coronary artery is MOST likely occluded?

ST elevation in II, III, and aVF indicates an inferior MI, most commonly from right coronary artery occlusion.

Why the other choices are less appropriate:

- A. LAD supplies the anterior wall (V1-V4).
- B. Left main causes widespread anterolateral changes.
- D. Circumflex typically affects lateral leads (I, aVL, V5-V6).

Question 21 · Correct Answer: A

Which finding is MOST consistent with cardiac tamponade on the PA catheter?

Cardiac tamponade produces equalization of diastolic pressures (CVP = RV diastolic = PCWP) due to external compression of all chambers.

Why the other choices are less appropriate:

- B. Discordant CVP and PCWP argues against tamponade.
- C. Low CVP/high CO/low SVR fits distributive shock.
- D. High CO does not occur in tamponade.

Question 22 · Correct Answer: C

A patient with hypertensive urgency (SBP 210) is ordered nicardipine IV. The goal BP reduction in the first hour is:

To avoid cerebral/coronary hypoperfusion, blood pressure should be lowered by no more than about 25% in the first hour (with most emergencies except dissection/stroke exceptions).

Why the other choices are less appropriate:

- A. Reducing to <120 immediately risks ischemic injury.
- B. Normalizing within 30 min is too rapid.
- D. Holding all therapy is inappropriate for severe hypertension requiring IV control.

Question 23 · Correct Answer: D

SVT is initially managed with:

For stable SVT, vagal maneuvers are attempted first, followed by adenosine if unsuccessful.

Why the other choices are less appropriate:

- A. Amiodarone is not first-line for SVT.
- B. Verapamil is a later option and avoided if the diagnosis is uncertain.
- C. Adenosine is used, but only after vagal maneuvers.

Question 24 · Correct Answer: C

What is the Killip Class for a patient with STEMI who has pulmonary edema on CXR?

Killip Class III denotes acute pulmonary edema (rales in more than half the lung fields) complicating STEMI.

Why the other choices are less appropriate:

- A. Killip I has no signs of heart failure.
- B. Killip IV is cardiogenic shock.
- D. Killip II is mild failure (S3, basilar rales).

Question 25 · Correct Answer: A

A patient's arterial line waveform is overdamped. The MOST likely cause is:

An overdamped arterial waveform (blunted upstroke, loss of dicrotic notch) is most often caused by an air bubble, clot, or kink in the tubing.

Why the other choices are less appropriate:

- B. Excessive tubing tends to cause underdamping/whip.
- C. Movement artifact causes irregular noise, not damping.
- D. Scale settings change display, not the waveform morphology.

Question 26 · Correct Answer: C

Which drug reduces preload AND afterload and is used in acute pulmonary edema?

Nitroprusside is a balanced arterial and venous dilator, reducing both preload and afterload, useful in acute pulmonary edema with hypertension.

Why the other choices are less appropriate:

- A. Epinephrine increases afterload and myocardial demand.
- B. Norepinephrine raises afterload.
- D. Vasopressin is a vasoconstrictor.

Question 27 · Correct Answer: B

A patient with cardiomyopathy has an EF of 25%. This is classified as:

An EF of 25% falls in the reduced range and represents heart failure with reduced ejection fraction (HFrEF).

Why the other choices are less appropriate:

- A. HFpEF is EF $\geq 50\%$.
- C. Mildly reduced EF is 41-49%.
- D. 25% is far below normal.

Question 28 · Correct Answer: D

What ECG change is MOST characteristic of a posterior MI?

Posterior MI shows ST depression with tall R waves in V1-V2 (mirror image of posterior ST elevation).

Why the other choices are less appropriate:

- A. ST elevation in V1-V2 suggests septal/anterior involvement.
- B. Q waves V1-V6 indicate extensive anterior infarct.
- C. ST elevation in I/aVL is high lateral.

Question 29 · Correct Answer: A

Which drug reverses heparin anticoagulation?

Protamine sulfate neutralizes heparin's anticoagulant effect.

Why the other choices are less appropriate:

- B. Vitamin K reverses warfarin.
- C. Andexanet alfa reverses factor Xa inhibitors.
- D. FFP is used for warfarin/coagulopathy, not specific heparin reversal.

Question 30 · Correct Answer: C

A patient with new-onset AF and hemodynamic instability. Priority treatment is:

New-onset AF with hemodynamic instability requires immediate synchronized cardioversion.

Why the other choices are less appropriate:

- A. Amiodarone is used in stable patients or as adjunct.
- B. Rate control is for stable AF.
- D. Delayed cardioversion applies only to stable patients.

Question 31 · Correct Answer: C

Dobutamine's primary mechanism is:

Dobutamine is primarily a beta-1 agonist that increases myocardial contractility (positive inotrope).

Why the other choices are less appropriate:

- A. Alpha-1 vasoconstriction describes phenylephrine.
- B. Alpha-2 agonism describes clonidine/dexmedetomidine.
- D. It is not a beta blocker.

Question 32 · Correct Answer: D

The phlebostatic axis for transducer zeroing is at:

The phlebostatic axis for zeroing hemodynamic transducers is the 4th intercostal space at the midaxillary line.

Why the other choices are less appropriate:

- A. 2nd ICS midclavicular is a landmark for needle decompression.
- B. 3rd ICS midclavicular is incorrect.
- C. 5th ICS anterior axillary is not the reference point.

Question 33 · Correct Answer: A

A patient has ST elevation in V1-V4 and a new left bundle branch block. This pattern suggests:

ST elevation in V1-V4 (with new LBBB) indicates an anterior STEMI from LAD occlusion.

Why the other choices are less appropriate:

- B. Posterior MI shows V1-V2 ST depression.
- C. Inferior STEMI affects II, III, aVF.
- D. Lateral STEMI affects I, aVL, V5-V6.

Question 34 · Correct Answer: C

Which rhythm requires UNSYNCHRONIZED defibrillation?

VF and pulseless VT are disorganized/pulseless rhythms treated with unsynchronized defibrillation.

Why the other choices are less appropriate:

- A. AF uses synchronized cardioversion.
- B. Stable VT is treated pharmacologically or with synchronized cardioversion.
- D. SVT with aberrancy uses synchronized cardioversion if unstable.

Question 35 · Correct Answer: B

Structural heart defect - a patient has a holosystolic murmur at the lower left sternal border with a thrill post-MI. You suspect:

A new holosystolic murmur with a thrill at the lower left sternal border after MI suggests a ventricular septal defect (rupture), a mechanical complication.

Why the other choices are less appropriate:

- A. Aortic stenosis is a systolic ejection murmur at the right upper sternal border.
- C. MVP gives a mid-systolic click.
- D. Aortic regurgitation is a diastolic murmur.

Question 36 · Correct Answer: D

A femoral-popliteal bypass patient returns from OR. The PRIORITY vascular assessment is:

After femoral-popliteal bypass, the priority is assessing distal perfusion (pedal pulses, color, temperature, capillary refill) to detect graft occlusion.

Why the other choices are less appropriate:

- A. Urine output is important but not the priority vascular assessment.
- B. CVP does not assess limb perfusion.
- C. Telemetry does not evaluate graft patency.

Question 37 · Correct Answer: C

Which hemodynamic finding supports a diagnosis of distributive (septic) shock?

Distributive/septic shock is characterized by low SVR (vasodilation), high or normal cardiac output, and low/normal PCWP.

Why the other choices are less appropriate:

- A. High SVR fits cardiogenic/hypovolemic shock.
- B. High PCWP with high SVR is cardiogenic.
- D. High SVR with low CO does not fit distributive shock.

Question 38 · Correct Answer: B

In cardiogenic shock, which intervention is MOST appropriate to bridge to definitive therapy?

An intra-aortic balloon pump improves coronary perfusion and reduces afterload, bridging cardiogenic shock patients to definitive therapy (revascularization, VAD, transplant).

Why the other choices are less appropriate:

- A. Diuretics do not support failing perfusion in shock.
- C. Vasopressin raises afterload and worsens pump function.
- D. Calcium channel blockers depress contractility.

Question 39 · Correct Answer: C

A patient with chest pain has troponin I of 8.5 ng/mL (nl <0.04), no ST elevation. This is MOST consistent with:

Elevated troponin without ST elevation indicates NSTEMI (myocardial necrosis without ST-segment elevation).

Why the other choices are less appropriate:

- A. Unstable angina has no troponin rise.
- B. STEMI requires ST elevation.
- D. Stable angina does not elevate troponin.

Question 40 · Correct Answer: C

Which intervention DECREASES afterload?

Sodium nitroprusside is a potent arterial dilator that decreases afterload.

Why the other choices are less appropriate:

- A. Vasopressin increases afterload.
- B. Norepinephrine increases afterload.
- D. Phenylephrine increases afterload.

Question 41 · Correct Answer: A

An ECG shows regular P waves with a constant PR interval of 0.24 seconds. This is:

A constant, prolonged PR interval >0.20 seconds with every P conducted is first-degree AV block.

Why the other choices are less appropriate:

- B. Normal PR is ≤ 0.20 s.
- C. Mobitz I shows progressive PR lengthening with dropped beats.
- D. Mobitz II shows dropped beats without PR lengthening.

Question 42 · Correct Answer: B

Beck's Triad is associated with which condition?

Beck's triad (hypotension, muffled heart sounds, JVD) is the classic presentation of cardiac tamponade.

Why the other choices are less appropriate:

- A. Tension pneumothorax has tracheal deviation and absent breath sounds.
- C. Aortic dissection presents with tearing pain and pulse deficits.
- D. PE presents with dyspnea, hypoxia, and pleuritic pain.

Question 43 · Correct Answer: C

A patient post-cardiac catheterization develops sudden groin hematoma and hypotension. Priority intervention is:

A groin hematoma with hypotension after catheterization signals arterial bleeding; apply direct manual compression and notify the physician STAT.

Why the other choices are less appropriate:

- A. Morphine treats pain but not the hemorrhage.
- B. Warm compresses would worsen bleeding.
- D. Leg elevation does not control arterial bleeding.

Question 44 · Correct Answer: D

Cardiomyopathy type associated with asymmetric septal hypertrophy and LVOT obstruction:

Asymmetric septal hypertrophy with left ventricular outflow tract obstruction defines hypertrophic obstructive cardiomyopathy (HOCM).

Why the other choices are less appropriate:

- A. Dilated cardiomyopathy has a dilated, poorly contracting LV.
- B. ARVC involves RV fibrofatty replacement.
- C. Restrictive cardiomyopathy has impaired filling without hypertrophy/obstruction.

Question 45 · Correct Answer: C

Mixed venous oxygen saturation (SvO₂) of 45% indicates:

An SvO₂ of 45% (normal 60-80%) indicates oxygen delivery is inadequate relative to demand, so tissues extract more oxygen.

Why the other choices are less appropriate:

- A. Increased delivery would raise SvO₂.
- B. 45% is well below normal.
- D. Hyperoxia would elevate, not lower, SvO₂.

Question 46 • Correct Answer: C

A patient on vasopressin 0.04 units/min for septic shock develops ischemic-appearing skin mottling on fingers. Priority action:

Digital ischemia during vasopressin infusion signals excessive peripheral vasoconstriction; notify the physician and prepare to decrease or discontinue vasopressin.

Why the other choices are less appropriate:

- A. Increasing the dose worsens ischemia.
- B. Switching to dopamine is not the standard corrective step and dopamine also constricts.
- D. Adding phenylephrine intensifies vasoconstriction.

Question 47 • Correct Answer: B

Ventricular tachycardia (VT) with a pulse and stable blood pressure is BEST managed with:

Stable VT with a pulse is treated with an antiarrhythmic such as amiodarone (150 mg IV over 10 minutes).

Why the other choices are less appropriate:

- A. Immediate cardioversion is for unstable VT.
- C. Adenosine is for SVT, not VT.
- D. Defibrillation is for pulseless VT/VF.

Question 48 • Correct Answer: C

Which medication is used as a FIRST-LINE agent for rate control in atrial fibrillation in patients without pre-excitation?

Diltiazem, a nondihydropyridine calcium channel blocker, is first-line for rate control in AF without pre-excitation.

Why the other choices are less appropriate:

- A. Amiodarone is used when other agents fail or for rhythm control.
- B. Lidocaine treats ventricular arrhythmias.
- D. Digoxin is slower-acting and adjunctive, especially in heart failure.

Question 49 • Correct Answer: A

A patient with suspected Type A aortic dissection should IMMEDIATELY be prepared for:

Type A aortic dissection is a surgical emergency requiring immediate operative repair.

Why the other choices are less appropriate:

- B. Beta-blockade/BP control is important adjunctive therapy but not definitive for Type A.
- C. Thrombolytics are contraindicated and would worsen bleeding.
- D. Anticoagulation is contraindicated in acute dissection.

Question 50 • Correct Answer: C

Normal left ventricular ejection fraction (LVEF) is:

Normal left ventricular ejection fraction is approximately 55-75%.

Why the other choices are less appropriate:

- A. <40% is reduced (HFrEF).
- B. 40-55% is mildly reduced/low-normal.
- D. 75-90% is supranormal/hyperdynamic.

Question 51 • Correct Answer: C

Pericarditis ECG changes include:

Acute pericarditis classically shows diffuse concave (saddle-shaped) ST elevation across most leads with PR depression.

Why the other choices are less appropriate:

- A. Localized ST elevation with Q waves suggests MI.
- B. Right axis/RBBB suggests RV strain (e.g., PE).
- D. ST depression with peaked T waves suggests ischemia/hyperkalemia.

Question 52 • Correct Answer: A

A patient with new-onset complete heart block and inferior MI should receive FIRST:

In symptomatic bradycardia from complete heart block, atropine is the first-line drug; if ineffective, transcutaneous pacing follows.

Why the other choices are less appropriate:

- B. Pacing is the next step if atropine fails, not the first.
- C. Permanent pacemaker is definitive but not the immediate first action.
- D. Amiodarone is not indicated for bradycardia/block.

Question 53 • Correct Answer: A

Acute mitral regurgitation post-MI is characterized by:

Acute papillary muscle rupture post-MI causes acute mitral regurgitation with sudden pulmonary edema and a new holosystolic apical murmur.

Why the other choices are less appropriate:

- B. Slow onset over days does not fit an acute mechanical complication.
- C. A diastolic LUSB murmur suggests aortic/pulmonic regurgitation.
- D. Gradual LV enlargement describes chronic, not acute, MR.

Question 54 • Correct Answer: B

The drug of choice for ventricular fibrillation refractory to defibrillation is:

For VF refractory to defibrillation, ACLS gives epinephrine 1 mg IV plus amiodarone 300 mg IV.

Why the other choices are less appropriate:

- A. Lidocaine is an alternative but amiodarone/epinephrine is the standard combination.
- C. Atropine is not used for VF.
- D. Vasopressin was removed from the ACLS pulseless algorithm.

Question 55 • Correct Answer: B

Which medication INCREASES automaticity and can be used in symptomatic bradycardia?

Atropine increases sinus node automaticity and AV conduction by blocking vagal tone, treating symptomatic bradycardia.

Why the other choices are less appropriate:

- A. Adenosine slows the heart.
- C. Amiodarone suppresses arrhythmias.
- D. Diltiazem slows AV conduction.

Question 56 • Correct Answer: C

ARDS is classified as severe when the PaO₂/FiO₂ ratio is:

By the Berlin definition, severe ARDS is a PaO₂/FiO₂ ratio <100 (on PEEP ≥5).

Why the other choices are less appropriate:

- A. 200-300 is mild ARDS.
- B. 300-400 is not ARDS.
- D. 100-200 is moderate ARDS.

Question 57 • Correct Answer: A

A patient on mechanical ventilation has a plateau pressure of 38 cmH₂O. The MOST appropriate intervention is:

A plateau pressure of 38 exceeds the safe limit (≤30 cmH₂O); reduce tidal volume toward 6 mL/kg IBW to prevent barotrauma.

Why the other choices are less appropriate:

- B. Increasing tidal volume raises plateau pressure further.
- C. Increasing PEEP could raise plateau pressure.
- D. Increasing rate does not lower plateau pressure and risks auto-PEEP.

Question 58 · Correct Answer: B

Rapid Shallow Breathing Index (RSBI) indicating readiness for extubation is:

An RSBI (respiratory rate/tidal volume) <105 predicts successful extubation.

Why the other choices are less appropriate:

- A. >200 predicts failure.
- C. 105-150 exceeds the threshold.
- D. >150 indicates rapid shallow breathing and likely failure.

Question 59 · Correct Answer: C

A patient with ARDS has refractory hypoxemia despite FiO₂ 100% and PEEP 14. The NEXT intervention is:

For refractory hypoxemia in ARDS despite high FiO₂ and PEEP, prone positioning improves oxygenation and mortality (PROSEVA).

Why the other choices are less appropriate:

- A. Decreasing PEEP worsens oxygenation.
- B. Extubation is unsafe in refractory hypoxemia.
- D. Vasopressors do not treat hypoxemia.

Question 60 · Correct Answer: A

Which ABG pattern represents UNCOMPENSATED metabolic acidosis?

pH 7.28 with HCO₃ 12 and low PaCO₂ shows metabolic acidosis; but because PaCO₂ (28) is appropriately low, note it is compensating - the clearly acidotic low-bicarb profile with acidemia is metabolic acidosis (option A best represents primary metabolic acidosis).

Why the other choices are less appropriate:

- B. pH 7.52 is alkalemia, not acidosis.
- C. pH 7.42 is normal (fully compensated).
- D. pH 7.28 with high PaCO₂ and normal HCO₃ is respiratory acidosis.

Question 61 · Correct Answer: A

A patient with COPD and acute exacerbation has SpO₂ 84%, is tachypneic. The INITIAL treatment is:

In a COPD exacerbation, controlled oxygen titrated to SpO₂ 88-92% plus BiPAP (NIV) is first-line to correct hypoxemia while avoiding CO₂ retention.

Why the other choices are less appropriate:

- B. High-flow non-rebreather risks worsening hypercapnia.
- C. Immediate intubation is not first-line before a NIV trial.
- D. IV aminophylline is not first-line and has a narrow therapeutic window.

Question 62 · Correct Answer: B

S1Q3T3 pattern on ECG is MOST associated with:

The S1Q3T3 pattern (S in I, Q and inverted T in III) reflects acute right heart strain and is associated with pulmonary embolism.

Why the other choices are less appropriate:

- A. Anterior MI shows precordial ST elevation.
- C. Pericarditis shows diffuse ST elevation.
- D. Hyperkalemia shows peaked T waves.

Question 63 · Correct Answer: C

Status asthmaticus is characterized by:

Status asthmaticus is life-threatening bronchospasm unresponsive to standard bronchodilator therapy.

Why the other choices are less appropriate:

- A. Responsiveness to albuterol excludes status asthmaticus.
- B. Mild intermittent asthma is the opposite.
- D. Allergen-only triggering does not define severity.

Question 64 • Correct Answer: D

Tension pneumothorax is treated with:

Tension pneumothorax is a clinical emergency treated with immediate needle decompression (2nd ICS midclavicular line) followed by chest tube.

Why the other choices are less appropriate:

- A. Waiting for CXR delays life-saving decompression.
- B. Positive-pressure ventilation can worsen tension physiology.
- C. Observation is inappropriate for a tension pneumothorax.

Question 65 • Correct Answer: A

Which PEEP level is MOST appropriate for the initial management of ARDS?

Initial ARDS management uses moderate PEEP (about 5-8 cmH₂O) titrated to oxygenation goals as part of lung-protective ventilation.

Why the other choices are less appropriate:

- B. 0-2 is too low to prevent alveolar collapse.
- C. 20 minimum is excessive as an initial setting.
- D. PEEP frequently exceeds 10 in ARDS.

Question 66 • Correct Answer: B

A ventilated patient has peak pressure 42 but plateau pressure 18 cmH₂O. This suggests:

A high peak pressure with a normal plateau pressure indicates increased airway resistance (bronchospasm, secretions, kinked tube).

Why the other choices are less appropriate:

- A. Decreased compliance raises both peak and plateau.
- C. These values are not normal.
- D. Auto-PEEP is assessed with an expiratory hold, not this peak/plateau split.

Question 67 • Correct Answer: B

A patient in acute respiratory failure has pH 7.20, PaCO₂ 72, HCO₃ 26. This ABG represents:

pH 7.20, PaCO₂ 72, HCO₃ 26 is respiratory acidosis; the slightly elevated bicarbonate reflects early/partial compensation.

Why the other choices are less appropriate:

- A. Metabolic acidosis would show low HCO₃.
- C. Metabolic alkalosis would show high pH.
- D. Respiratory alkalosis would show high pH and low PaCO₂.

Question 68 • Correct Answer: A

The MOST sensitive test to rule out pulmonary embolism in a low-risk patient is:

In a low pretest-probability patient, a normal D-dimer has high sensitivity and effectively rules out PE.

Why the other choices are less appropriate:

- B. Lower extremity Doppler detects DVT but does not rule out PE.
- C. V/Q scan is used when CT is contraindicated, not as the initial rule-out in low risk.
- D. CTPA is the confirmatory test in higher-probability patients, not the rule-out tool in low risk.

Question 69 • Correct Answer: A

Massive PE treatment in a hemodynamically unstable patient is:

Massive (high-risk) PE with hemodynamic instability is treated with systemic thrombolytics (tPA) or surgical/catheter embolectomy if lytics are contraindicated.

Why the other choices are less appropriate:

- B. Anticoagulation alone is insufficient for a hemodynamically unstable patient.
- C. Bronchoscopy has no role.
- D. Biopsy has no role in acute PE.

Question 70 • Correct Answer: C

Which bronchodilator is preferred for intubation in status asthmaticus?

Ketamine is the preferred induction agent for intubating status asthmaticus because of its bronchodilating and sympathomimetic properties.

Why the other choices are less appropriate:

- A. Propofol can cause hypotension and bronchospasm is not treated by it.
- B. Midazolam lacks bronchodilator effect.
- D. Vecuronium is a paralytic without sedation or bronchodilation.

Question 71 • Correct Answer: C

Normal tidal volume (TV) for lung protective ventilation in ARDS is:

Lung-protective ventilation in ARDS uses a tidal volume of 6 mL/kg ideal body weight (ARMA trial).

Why the other choices are less appropriate:

- A. 10-12 mL/kg causes volutrauma.
- B. 8-10 mL/kg is higher than protective.
- D. 4 mL/kg may be used in refractory cases but 6 is standard.

Question 72 • Correct Answer: D

Spontaneous Breathing Trial (SBT) is performed with the ventilator set at:

A spontaneous breathing trial is performed on CPAP or low pressure support (≤ 5 cmH₂O) for 30-120 minutes.

Why the other choices are less appropriate:

- A. AC mode with high PEEP is full support, not an SBT.
- B. FiO₂ 100% is not the SBT parameter of interest.
- C. SIMV at full support is not a spontaneous trial.

Question 73 • Correct Answer: A

A patient develops sudden shortness of breath and hypoxemia 3 hours after a blood transfusion. CXR shows bilateral infiltrates. BP is normal. This...

Dyspnea and bilateral infiltrates within hours of transfusion with normal blood pressure indicate TRALI (non-cardiogenic pulmonary edema).

Why the other choices are less appropriate:

- B. TACO presents with hypertension and volume overload signs.
- C. Acute hemolytic reaction presents with fever, flank pain, and hemoglobinuria.
- D. Anaphylaxis presents with urticaria, bronchospasm, and hypotension.

Question 74 • Correct Answer: B

COPD patients should have O₂ titrated to avoid:

In some COPD patients excess oxygen can worsen hypercapnia; oxygen is titrated to a target (88-92%) to avoid suppressing ventilatory drive and worsening CO₂ retention.

Why the other choices are less appropriate:

- A. The concern is worsening hypercapnia, not suppressing it.
- C. Respiratory alkalosis is not the primary risk.
- D. Polycythemia is a chronic consequence of hypoxemia, not the titration concern.

Question 75 • Correct Answer: B

Which ventilator mode delivers a GUARANTEED tidal volume regardless of lung compliance?

Volume-controlled assist control delivers a set (guaranteed) tidal volume regardless of lung compliance.

Why the other choices are less appropriate:

- A. Pressure support delivers a set pressure, so volume varies.
- C. CPAP provides constant pressure without a set volume.
- D. APRV is a pressure-targeted mode.

Question 76 • Correct Answer: D

Pulmonary hypertension is defined as mean pulmonary arterial pressure of:

Current ESC/ERS guidelines define pulmonary hypertension as mean pulmonary arterial pressure >20 mmHg at rest.

Why the other choices are less appropriate:

- A. >15 mmHg is within normal range.
- B. Normal PAP is not a definition of PH.
- C. >30 mmHg exceeds the diagnostic threshold.

Question 77 • Correct Answer: D

Auto-PEEP (intrinsic PEEP) is BEST managed by:

Applied extrinsic PEEP set near the level of auto-PEEP reduces the inspiratory trigger work and effects of dynamic hyperinflation; allowing longer expiratory time (lower rate/prolonged expiration) also helps. Adding extrinsic PEEP to match auto-PEEP is a key management step.

Why the other choices are less appropriate:

- A. Decreasing I:E toward more expiratory time helps, but the answer here targets matching extrinsic PEEP; note both are valid but D is emphasized.
- B. Increasing tidal volume worsens hyperinflation.
- C. Increasing rate shortens expiration and worsens auto-PEEP.

Question 78 • Correct Answer: B

Pulmonary hypertension in ICU can be treated with inhaled:

Inhaled nitric oxide is a selective pulmonary vasodilator used to treat pulmonary hypertension in the ICU.

Why the other choices are less appropriate:

- A. 100% oxygen alone is not a targeted pulmonary vasodilator.
- C. Inhaled CO₂ would worsen the condition.
- D. Heliox reduces airway resistance but does not treat pulmonary hypertension.

Question 79 • Correct Answer: C

After bronchoscopy with biopsy, the nurse should FIRST assess for:

After bronchoscopy with biopsy, the nurse first assesses for respiratory distress, hemoptysis, and pneumothorax.

Why the other choices are less appropriate:

- A. Urine output is not the immediate airway concern.
- B. Arrhythmia is possible but not the primary post-biopsy assessment.
- D. Skin changes are not the priority.

Question 80 • Correct Answer: D

A patient has fractured ribs 5-9 on the right. With inspiration, the right chest wall moves inward. This describes:

Multiple adjacent rib fractures producing paradoxical inward movement of the chest wall on inspiration describe flail chest.

Why the other choices are less appropriate:

- A. Simple pneumothorax does not cause paradoxical wall motion.
- B. Tension pneumothorax presents with hemodynamic collapse and tracheal deviation.
- C. Hemothorax presents with dullness and blood in the pleural space.

Question 81 • Correct Answer: A

Which acid-base disorder is MOST commonly associated with severe COPD exacerbation?

Severe COPD exacerbation causes CO₂ retention from airflow limitation, producing respiratory acidosis (high PaCO₂, low pH).

Why the other choices are less appropriate:

- B. Metabolic alkalosis is not the primary disorder in COPD.
- C. Metabolic acidosis is not typical unless there is superimposed shock/lactic acidosis.
- D. Respiratory alkalosis reflects hyperventilation, the opposite of CO₂ retention.

Question 82 · Correct Answer: B

Chest tube insertion for hemothorax requires what MINIMUM drainage before surgical thoracotomy is indicated?

Thoracotomy for hemothorax is indicated with ≥ 1500 mL of initial chest tube drainage or ongoing 200 mL/hr for 2-4 hours.

Why the other choices are less appropriate:

- A. 500 mL total does not meet surgical thresholds.
- C. 1000 mL total alone is below the accepted cutoff.
- D. 250 mL/hr for only 1 hour is insufficient duration to indicate thoracotomy.

Question 83 · Correct Answer: C

Which intervention REDUCES the incidence of ventilator-associated pneumonia (VAP)?

The VAP bundle reduces incidence: head-of-bed elevation 30-45 degrees, daily oral chlorhexidine care, and strict hand hygiene (plus SAT/SBT and subglottic suction).

Why the other choices are less appropriate:

- A. Supine positioning increases aspiration and VAP risk.
- B. Continuous sedation without daily awakening prolongs ventilation and raises VAP risk.
- D. Humidification without a filter does not reduce VAP.

Question 84 · Correct Answer: D

A patient receiving mechanical ventilation has rising peak airway pressures with normal plateau. The cause is MOST likely:

A rising peak pressure with a normal plateau indicates increased airway resistance, such as bronchospasm, a kinked ET tube, or a mucus plug.

Why the other choices are less appropriate:

- A. Decreased compliance raises both peak and plateau pressures.
- B. Pulmonary fibrosis is a compliance problem, raising plateau too.
- C. Pneumothorax raises both peak and plateau pressures.

Question 85 · Correct Answer: A

Permissive hypercapnia is USED in which condition?

Permissive hypercapnia allows PaCO₂ to rise to limit tidal volumes and prevent volutrauma in severe ARDS and status asthmaticus.

Why the other choices are less appropriate:

- B. Metabolic alkalosis is unrelated to this ventilator strategy.
- C. Heart failure is not an indication.
- D. Renal failure is not an indication.

Question 86 · Correct Answer: B

Which drug is first-line for empiric antibiotic treatment of community-acquired pneumonia in an ICU patient?

IDSA/ATS guidelines for ICU-level community-acquired pneumonia recommend a beta-lactam PLUS either azithromycin or a respiratory fluoroquinolone.

Why the other choices are less appropriate:

- A. Penicillin VK alone lacks atypical and adequate coverage.
- C. Azithromycin monotherapy is inadequate for severe CAP.
- D. Vancomycin monotherapy targets MRSA only, not typical CAP pathogens.

Question 87 • Correct Answer: C

A patient has acute pulmonary edema secondary to flash heart failure. Initial treatment includes:

Acute (flash) pulmonary edema is treated with preload reduction and improved oxygenation: nitroglycerin, furosemide, morphine, and upright positioning.

Why the other choices are less appropriate:

- A. IV fluids wide open worsen pulmonary edema.
- B. Prone positioning is not indicated for cardiogenic pulmonary edema.
- D. Immediate high PEEP intubation is not the initial step; noninvasive support and vasodilators come first.

Question 88 • Correct Answer: D

Which ABG pattern is consistent with ACUTE respiratory alkalosis?

Acute respiratory alkalosis shows high pH with low PaCO₂ and a normal, uncompensated HCO₃ (pH 7.55, PaCO₂ 28, HCO₃ 24).

Why the other choices are less appropriate:

- A. pH 7.28/PaCO₂ 55 is respiratory acidosis.
- B. pH 7.32/PaCO₂ 32/HCO₃ 14 is metabolic acidosis with respiratory compensation.
- C. pH 7.42 is normal/compensated, not acute alkalosis.

Question 89 • Correct Answer: A

A patient with pulmonary embolism on heparin develops chest pain and new hypotension. The NEXT intervention is:

New hypotension and chest pain in a PE patient on heparin signals a massive PE with hemodynamic compromise; systemic thrombolytics (tPA) are indicated absent contraindications.

Why the other choices are less appropriate:

- B. Increasing heparin does not reverse the obstructive shock quickly enough.
- C. Bronchoscopy has no role here.
- D. Amiodarone treats arrhythmia, not the underlying massive PE.

Question 90 • Correct Answer: B

Thoracic surgery patients require assessment for:

Thoracic surgery patients require assessment of the chest drainage system for air leaks and monitoring of breath sounds for pneumothorax/hemothorax.

Why the other choices are less appropriate:

- A. GI bleeding is not the focused thoracic assessment.
- C. Pupillary changes are a neuro assessment.
- D. Glucose is not the priority thoracic assessment.

Question 91 • Correct Answer: C

Normal PaO₂ range on room air is:

The normal PaO₂ on room air is 80-100 mmHg.

Why the other choices are less appropriate:

- A. 60-70 mmHg indicates mild hypoxemia.
- B. 110-120 mmHg exceeds room-air norms.
- D. 50-60 mmHg is frank hypoxemia.

Question 92 • Correct Answer: D

The MOST common cause of acute respiratory failure is:

Pneumonia with sepsis is the most common cause of acute respiratory failure/ARDS in critically ill patients.

Why the other choices are less appropriate:

- A. PE is a less common overall cause.
- B. Pneumothorax is uncommon as a leading cause.
- C. Asthma alone is a less frequent cause of respiratory failure.

Question 93 • Correct Answer: A

A patient's ventilator alarms high pressure. You note absent breath sounds on the left. FIRST action:

High pressure with absent left breath sounds suggests right mainstem intubation; auscultate and withdraw the ET tube 2-3 cm to reposition.

Why the other choices are less appropriate:

- B. Suctioning does not correct tube malposition.
- C. Increasing tidal volume worsens the problem.
- D. Calling RT delays a simple corrective action the nurse can perform.

Question 94 • Correct Answer: B

Which finding indicates the patient has FAILED the spontaneous breathing trial?

SpO2 86%, RR 36, diaphoresis, and accessory muscle use are signs of a failed spontaneous breathing trial.

Why the other choices are less appropriate:

- A. SpO2 96%, RR 18, no distress indicates a passed trial.
- C. SpO2 94%, RR 22, stable is acceptable.
- D. A mild RR increase from 16 to 20 is not failure.

Question 95 • Correct Answer: C

The 'A-a gradient' is clinically useful for:

The A-a gradient distinguishes pulmonary causes of hypoxemia (elevated gradient) from non-pulmonary causes such as hypoventilation (normal gradient).

Why the other choices are less appropriate:

- A. It does not assess metabolic acidosis.
- B. Minute ventilation is RR x tidal volume, unrelated.
- D. Cardiac output is measured by other means.

Question 96 • Correct Answer: D

A patient with Guillain-Barré syndrome is being monitored for respiratory failure. The parameter to MOST closely watch is:

In Guillain-Barre, serial vital capacity is the key parameter; intubate when VC falls below about 20 mL/kg (rule of 20-30-40).

Why the other choices are less appropriate:

- A. SpO2 falls late and is insensitive to neuromuscular decline.
- B. Peak expiratory flow is not the standard monitor.
- C. Scheduled ABGs alone miss rapid deterioration.

Question 97 • Correct Answer: A

After endotracheal intubation, the FIRST step to confirm tube placement is:

Initial confirmation is clinical (chest rise and bilateral auscultation), followed by waveform capnography as the gold standard, then CXR for depth.

Why the other choices are less appropriate:

- B. CXR confirms position but is not the first step.
- C. SpO2 lags and cannot confirm placement.
- D. Tracheal palpation is unreliable.

Question 98 • Correct Answer: B

A patient with submersion (near-drowning) injury presents with normal SpO2 on arrival. The nurse knows:

After submersion injury, ARDS/secondary drowning can develop up to 24 hours later, so observation is required even with a normal initial SpO2.

Why the other choices are less appropriate:

- A. Discharge after 1 hour is unsafe given delayed ARDS risk.
- C. No monitoring is inappropriate.
- D. Empiric antibiotics are not routinely indicated.

Question 99 · Correct Answer: C

Inhaled nitric oxide (iNO) works by:

Inhaled nitric oxide selectively dilates the pulmonary vasculature in ventilated lung units, improving V/Q matching and oxygenation.

Why the other choices are less appropriate:

- A. It does not cause systemic arterial vasodilation at inhaled doses.
- B. It is not an inotrope.
- D. It is not a large-airway bronchodilator.

Question 100 · Correct Answer: D

The FiO₂ delivered by a simple face mask at 8 L/min is approximately:

A simple face mask at 8 L/min delivers approximately 35-50% FiO₂.

Why the other choices are less appropriate:

- A. 21% is room air.
- B. 90-100% requires a non-rebreather.
- C. 60-70% exceeds simple mask capability.

Question 101 · Correct Answer: A

Which pulmonary condition is associated with 'ground glass opacities' on CT chest?

Ground-glass opacities on CT chest are characteristic of ARDS and interstitial/viral pneumonia (including COVID-19).

Why the other choices are less appropriate:

- B. Emphysema shows hyperinflation and bullae.
- C. Large effusion shows dependent fluid, not ground glass.
- D. Pneumothorax shows lucency without lung markings.

Question 102 · Correct Answer: B

A patient develops sudden chest pain, hypoxia, and a deviated trachea. The IMMEDIATE nursing action is:

Sudden chest pain, hypoxia, and tracheal deviation indicate tension pneumothorax; immediate needle decompression is required.

Why the other choices are less appropriate:

- A. Waiting for CXR delays life-saving treatment.
- C. Supine positioning does not treat the tension physiology.
- D. CPR is not indicated without arrest.

Question 103 · Correct Answer: C

Surfactant's primary function in the lungs is to:

Surfactant reduces alveolar surface tension, preventing alveolar collapse and maintaining functional residual capacity.

Why the other choices are less appropriate:

- A. It does not transport oxygen across membranes.
- B. It is not primarily bactericidal.
- D. It does not increase O₂ consumption.

Question 104 · Correct Answer: D

Non-invasive positive pressure ventilation (BiPAP) is CONTRAINDICATED in:

BiPAP is contraindicated when the patient cannot protect the airway, as with vomiting and altered level of consciousness (aspiration risk).

Why the other choices are less appropriate:

- A. COPD exacerbation is a key indication for BiPAP.
- B. Cardiogenic pulmonary edema is an indication.
- C. OSA is an indication for positive pressure.

Question 105 · Correct Answer: A

The PRIMARY goal of oxygen therapy in respiratory failure is to maintain PaO₂ at:

The oxygen therapy goal in respiratory failure is a PaO₂ $\geq$ 60 mmHg (SpO₂ $\geq$ 90%).

Why the other choices are less appropriate:

- B. <60 mmHg is hypoxemic and unacceptable.
- C. >120 mmHg risks hyperoxia.
- D. Exactly 80 mmHg at all times is not a realistic clinical target.

Question 106 · Correct Answer: B

Pulmonary contusion is MOST commonly associated with:

Pulmonary contusion most commonly results from blunt chest trauma, such as a steering-wheel impact in an MVA.

Why the other choices are less appropriate:

- A. Penetrating trauma more often causes lacerations/hemothorax.
- C. Spontaneous pneumothorax is not a contusion mechanism.
- D. Aspiration causes pneumonitis, not contusion.

Question 107 · Correct Answer: C

A patient has pH 7.38, PaCO₂ 52, HCO₃ 30. This ABG represents:

pH 7.38 (normal) with high PaCO₂ 52 and high HCO₃ 30 represents fully compensated (chronic) respiratory acidosis.

Why the other choices are less appropriate:

- A. Uncompensated acidosis would have a low pH.
- B. Metabolic alkalosis would show high pH.
- D. The values are not normal despite the normal pH.

Question 108 · Correct Answer: D

Which intervention is PROVEN to reduce mortality in ARDS?

Low tidal volume ventilation (6 mL/kg IBW; ARMA trial) is the proven mortality-reducing intervention in ARDS.

Why the other choices are less appropriate:

- A. High tidal volume causes volutrauma and increases mortality.
- B. Paralysis without lung-protective ventilation is not the proven strategy.
- C. Routine 100% FiO₂ causes oxygen toxicity/absorption atelectasis.

Question 109 · Correct Answer: A

A patient on mechanical ventilation has increased peak AND plateau pressures. This suggests:

Increased peak AND plateau pressures indicate decreased lung compliance (pulmonary edema, ARDS, atelectasis).

Why the other choices are less appropriate:

- B. Increased resistance alone raises peak but not plateau.
- C. Right mainstem intubation raises peak with unequal breath sounds, not both pressures diffusely.
- D. Auto-PEEP is diagnosed by expiratory flow/waveform, not by a raised plateau alone.

Question 110 · Correct Answer: B

A patient post-thoracotomy has 400 mL of bright red chest tube output in 2 hours. The nurse's FIRST action is:

400 mL of bright red output in 2 hours ($\geq$ 200 mL/hr) suggests active surgical hemorrhage; notify the surgeon STAT.

Why the other choices are less appropriate:

- A. Clamping the chest tube risks tension pneumothorax/tamponade.
- C. Documenting and monitoring delays needed intervention.
- D. Increasing fluids treats the symptom but ignores the surgical source.

Question 111 · Correct Answer: C

DKA is differentiated from HHS primarily by:

DKA is distinguished from HHS by significant ketonemia and an anion-gap metabolic acidosis.

Why the other choices are less appropriate:

- A. Glucose is typically higher in HHS but overlaps and is not the key differentiator.
- B. Age is a demographic tendency, not the defining feature.
- D. Altered mental status occurs in both conditions.

Question 112 · Correct Answer: D

In DKA, insulin infusion should NOT be started until serum potassium is:

Insulin should not be started in DKA until serum potassium is ≥ 3.5 mEq/L, because insulin drives potassium intracellularly and can cause life-threatening hypokalemia.

Why the other choices are less appropriate:

- A. < 2.5 mEq/L is a severe hypokalemia threshold, not the start cutoff.
- B. Exactly 4.0 is arbitrary and not the guideline.
- C. > 5.0 would unnecessarily delay insulin.

Question 113 · Correct Answer: A

AKI Stage 3 (KDIGO) is defined by serum creatinine:

KDIGO AKI Stage 3 is serum creatinine 3 times baseline or ≥ 4 mg/dL (or initiation of renal replacement therapy).

Why the other choices are less appropriate:

- B. 2.0-2.9x baseline is Stage 2.
- C. 1.5-1.9x baseline is Stage 1.
- D. 1.3x baseline does not meet Stage criteria.

Question 114 · Correct Answer: B

A patient has sodium 118 mEq/L with seizures. The APPROPRIATE initial treatment is:

Symptomatic severe hyponatremia (Na 118 with seizures) is treated with 3% hypertonic saline, correcting at $\leq 1-2$ mEq/L/hr (max $\sim 10-12$ mEq/L/24 hr) to avoid osmotic demyelination.

Why the other choices are less appropriate:

- A. Rapid correction to 140 causes central pontine myelinolysis.
- C. Fluid restriction alone is inadequate for seizures.
- D. Vaptans are not first-line for acute symptomatic hyponatremia.

Question 115 · Correct Answer: C

Which sign is pathognomonic for hemorrhagic pancreatitis?

Grey Turner's sign (flank bruising) and Cullen's sign (periumbilical bruising) indicate hemorrhagic pancreatitis.

Why the other choices are less appropriate:

- A. Murphy's sign indicates cholecystitis.
- B. Homan's sign relates to DVT.
- D. Chvostek's sign indicates hypocalcemia.

Question 116 · Correct Answer: D

The antidote for acetaminophen (Tylenol) overdose is:

N-acetylcysteine (NAC) is the antidote for acetaminophen toxicity, replenishing glutathione.

Why the other choices are less appropriate:

- A. Activated charcoal is decontamination, not the antidote.
- B. Flumazenil reverses benzodiazepines.
- C. Naloxone reverses opioids.

Question 117 · Correct Answer: A

HIT type II is characterized by:

HIT type II is an immune-mediated platelet drop (>50%) occurring 5-14 days after heparin exposure, with paradoxical thrombotic risk.

Why the other choices are less appropriate:

- B. Mild early thrombocytopenia without thrombosis describes non-immune HIT type I.
- C. A 10% drop is not diagnostic of HIT II.
- D. A non-immune mild decrease describes type I.

Question 118 · Correct Answer: B

CRRT is preferred over intermittent hemodialysis in AKI patients who are:

CRRT is preferred in hemodynamically unstable, hypotensive AKI patients because it removes fluid and solutes gradually.

Why the other choices are less appropriate:

- A. Stable patients tolerate intermittent hemodialysis.
- C. Baseline CKD alone does not dictate CRRT.
- D. Urgent potassium removal is better achieved with intermittent HD.

Question 119 · Correct Answer: C

A patient with hepatic encephalopathy is ordered lactulose. The goal is:

Lactulose is titrated to achieve 3-4 loose stools per day, trapping ammonia as NH_4^+ for excretion.

Why the other choices are less appropriate:

- A. Constipation worsens encephalopathy by retaining ammonia.
- B. Suppressing all stool is harmful.
- D. Oral dosing is standard; enema is reserved for those unable to take PO.

Question 120 · Correct Answer: D

Which laboratory pattern is consistent with DIC?

DIC is a consumptive coagulopathy: increased PT and PTT, decreased fibrinogen, elevated D-dimer, and thrombocytopenia.

Why the other choices are less appropriate:

- A. Increased fibrinogen and low D-dimer are the opposite of DIC.
- B. Shortened PT/PTT with normal D-dimer is not DIC.
- C. This partial pattern misses the hallmark low fibrinogen and high D-dimer.

Question 121 · Correct Answer: A

Acute tubular necrosis (ATN) is MOST commonly caused by:

Acute tubular necrosis is most commonly caused by ischemia (hypoperfusion/shock) or nephrotoxic agents (aminoglycosides, contrast).

Why the other choices are less appropriate:

- B. Obstruction causes postrenal AKI.
- C. Glomerulonephritis is a distinct glomerular cause.
- D. Interstitial nephritis is a separate intrinsic cause.

Question 122 · Correct Answer: B

Tumor lysis syndrome (TLS) is characterized by:

Tumor lysis syndrome causes hyperkalemia, hyperphosphatemia, hypocalcemia, and hyperuricemia from massive cell lysis.

Why the other choices are less appropriate:

- A. These are the opposite electrolyte shifts.
- C. Normal electrolytes exclude TLS.
- D. Hypernatremia/hypochloremia is not the TLS pattern.

Question 123 · Correct Answer: C

Parkland formula for burn resuscitation: $4 \text{ mL} \times 70 \text{ kg} \times 40\% \text{ TBSA} = ?$

Parkland formula: $4 \times 70 \times 40 = 11,200 \text{ mL}$; give half in the first 8 hours and half over the next 16 hours.

Why the other choices are less appropriate:

- A. 7,000 mL and all in 8 hours miscalculates and misapplies timing.
- B. 5,000 mL total is incorrect.
- D. 14,000 mL given evenly is both wrong volume and timing.

Question 124 · Correct Answer: D

Which lab result is the BEST early indicator of acute kidney injury?

A serum creatinine rise of 0.3 mg/dL within 48 hours (KDIGO) is the best early indicator of AKI.

Why the other choices are less appropriate:

- A. BUN alone is affected by many non-renal factors.
- B. 24-hour urine protein assesses proteinuria, not acute injury.
- C. Specific gravity is nonspecific.

Question 125 · Correct Answer: A

A patient with cirrhosis develops sudden mental status change, asterixis, and fetor hepaticus. The priority intervention is:

Asterixis and fetor hepaticus with altered mentation indicate hepatic encephalopathy; give lactulose and treat the precipitating cause.

Why the other choices are less appropriate:

- B. Vitamin K addresses coagulopathy, not encephalopathy.
- C. Paracentesis treats ascites/SBP, not the acute encephalopathy.
- D. IV dextrose treats hypoglycemia, not the primary issue.

Question 126 · Correct Answer: B

Thyroid storm is BEST distinguished from severe hyperthyroidism by:

Thyroid storm is distinguished by systemic decompensation quantified with the Burch-Wartofsky Point Scale (score ≥ 45 suggests storm).

Why the other choices are less appropriate:

- A. TSH is suppressed in both and not discriminating.
- C. Free T4 elevation occurs in both.
- D. HR >100 is nonspecific tachycardia.

Question 127 · Correct Answer: C

In adrenal crisis, the FIRST priority drug is:

In adrenal crisis, the first priority drug is hydrocortisone 100 mg IV bolus, along with fluids and glucose.

Why the other choices are less appropriate:

- A. Fludrocortisone is oral maintenance, not emergent.
- B. Delaying steroids for an ACTH stim test is dangerous; dexamethasone can be used if it will not interfere with testing but is not first-line here.
- D. Aldosterone is not the acute treatment.

Question 128 · Correct Answer: D

SIADH is treated with:

SIADH is treated with fluid restriction (about 800-1000 mL/day), with vaptans for resistant cases.

Why the other choices are less appropriate:

- A. Wide-open normal saline can worsen hyponatremia.
- B. Furosemide alone is not primary therapy.
- C. Hypertonic saline is reserved for severe symptomatic hyponatremia, not all cases.

Question 129 · Correct Answer: A

Diabetes insipidus (DI) is characterized by:

Diabetes insipidus produces large volumes of dilute urine with elevated serum sodium and osmolality due to ADH deficiency or resistance.

Why the other choices are less appropriate:

- B. Low output with concentrated urine describes SIADH-like states.
- C. Hyperkalemia/acidosis is not characteristic.
- D. Oliguria and fluid overload are the opposite of DI.

Question 130 · Correct Answer: B

A patient develops peaked T-waves and widened QRS on ECG. Serum K⁺ = 6.8. FIRST intervention:

With peaked T-waves, widened QRS, and K⁺ 6.8, the first intervention is IV calcium gluconate to stabilize the cardiac membrane.

Why the other choices are less appropriate:

- A. Sodium bicarbonate shifts K⁺ but acts more slowly and does not stabilize the membrane first.
- C. Furosemide excretes K⁺ over time, not immediately protective.
- D. Kayexalate acts slowly and is not first for cardiac toxicity.

Question 131 · Correct Answer: B

Ranson's criteria are used to assess severity of:

Ranson's criteria assess the severity of acute pancreatitis at admission and 48 hours.

Why the other choices are less appropriate:

- A. Hepatic failure uses other scores (e.g., MELD).
- C. GI hemorrhage uses tools like Rockall/Blatchford.
- D. Renal failure uses KDIGO staging.

Question 132 · Correct Answer: D

Upper GI bleed is most commonly caused by:

Peptic ulcer disease is the most common cause of upper GI bleeding overall (about 50%).

Why the other choices are less appropriate:

- A. Diverticulosis causes lower GI bleeding.
- B. Varices are a major but less common cause than PUD.
- C. Mallory-Weiss tears account for a minority of cases.

Question 133 · Correct Answer: A

A patient with ESRD develops pericardial friction rub, chest pain relieved by leaning forward. This describes:

A friction rub with positional chest pain relieved by leaning forward in an ESRD patient is uremic pericarditis, an indication for dialysis.

Why the other choices are less appropriate:

- B. Pleuritis produces pleuritic pain tied to respiration, not a pericardial rub.
- C. Tamponade causes hypotension, muffled sounds, and JVD.
- D. Myocarditis presents with heart failure/arrhythmia rather than a positional rub.

Question 134 · Correct Answer: B

Which finding is MOST consistent with prerenal AKI?

Prerenal AKI shows FENa <1%, high urine osmolality, and BUN:Cr ratio >20:1 from avid sodium/water reabsorption.

Why the other choices are less appropriate:

- A. FENa >2% and muddy brown casts indicate ATN.
- C. Eosinophils with NSAID use suggest interstitial nephritis.
- D. Urine Na >40 and isosthenuria indicate intrinsic (ATN) injury.

Question 135 · Correct Answer: C

HHS (Hyperglycemic Hyperosmolar State) is characterized by blood glucose usually:

HHS is characterized by glucose usually >600 mg/dL and marked hyperosmolarity WITHOUT significant ketoacidosis.

Why the other choices are less appropriate:

- A. >180 with ketones does not fit HHS.
- B. 300-400 with ketonuria suggests DKA.
- D. Metabolic acidosis at any glucose describes DKA, not HHS.

Question 136 · Correct Answer: D

Coumadin (warfarin) works by inhibiting:

Warfarin inhibits the vitamin K-dependent clotting factors II, VII, IX, and X (and proteins C and S).

Why the other choices are less appropriate:

- A. Factor Xa inhibitors (e.g., rivaroxaban) act differently.
- B. Direct thrombin inhibitors (e.g., dabigatran) act differently.
- C. Antiplatelet agents inhibit platelet aggregation, not clotting factors.

Question 137 · Correct Answer: A

The MOST common cause of upper GI bleeding in critically ill patients is:

Stress ulcers are the most common cause of upper GI bleeding in critically ill ICU patients.

Why the other choices are less appropriate:

- B. Esophageal cancer is uncommon in this setting.
- C. Portal hypertension/varices affect cirrhotics, not most ICU patients.
- D. Outpatient peptic ulcers are not the ICU-specific cause.

Question 138 · Correct Answer: B

Which drug is used to control bleeding from esophageal varices?

Octreotide (a somatostatin analogue) reduces splanchnic blood flow and, with endoscopic band ligation, controls variceal bleeding.

Why the other choices are less appropriate:

- A. Heparin would worsen bleeding.
- C. Vitamin K corrects coagulopathy but does not control variceal bleeding acutely.
- D. Clopidogrel is an antiplatelet and would worsen bleeding.

Question 139 · Correct Answer: C

A patient with chronic kidney disease has Hgb 8.5 g/dL. The cause is MOST likely:

Anemia in CKD is most commonly due to decreased erythropoietin production by the kidneys.

Why the other choices are less appropriate:

- A. Iron deficiency contributes but is not the primary CKD mechanism.
- B. B12 deficiency causes megaloblastic anemia, unrelated to CKD.
- D. Autoimmune hemolysis is not the typical CKD cause.

Question 140 · Correct Answer: D

Abdominal compartment syndrome is defined by intra-abdominal pressure (IAP):

Abdominal compartment syndrome is defined as sustained intra-abdominal pressure ≥ 20 mmHg with new organ dysfunction.

Why the other choices are less appropriate:

- A. >8 mmHg is within/near normal range.
- B. ≥ 15 mmHg with normal organ function is intra-abdominal hypertension, not ACS.
- C. ≥ 12 mmHg defines intra-abdominal hypertension, not ACS.

Question 141 · Correct Answer: A

A patient with DKA has initial K⁺ = 5.2. After starting insulin infusion, K⁺ drops to 3.0. The correct action is:

When K⁺ falls to 3.0 during DKA treatment, replace potassium IV while continuing insulin to close the anion gap.

Why the other choices are less appropriate:

- B. Continuing insulin without replacing K⁺ risks dangerous hypokalemia and arrhythmia.
- C. Holding insulin stalls resolution of ketoacidosis; replace K⁺ instead.
- D. Bicarbonate is not indicated and can worsen hypokalemia.

Question 142 · Correct Answer: B

Trousseau's sign and Chvostek's sign indicate:

Trousseau's and Chvostek's signs reflect neuromuscular hyperexcitability from hypocalcemia.

Why the other choices are less appropriate:

- A. Hyperkalemia causes peaked T-waves, not these signs.
- C. Hyponatremia causes CNS symptoms, not these signs.
- D. Hypermagnesemia causes decreased reflexes.

Question 143 · Correct Answer: C

TRALI (Transfusion-Related Acute Lung Injury) presents within:

TRALI presents within 6 hours of transfusion with hypoxia and non-cardiogenic pulmonary edema/bilateral infiltrates.

Why the other choices are less appropriate:

- A. 24-48 hours is too late for TRALI.
- B. 72-hour late onset is not TRALI.
- D. It is not limited to massive transfusion.

Question 144 · Correct Answer: D

Heparin-induced thrombocytopenia (HIT) management requires:

HIT management requires stopping ALL heparin (including flushes) and starting a non-heparin anticoagulant such as argatroban or bivalirudin.

Why the other choices are less appropriate:

- A. Increasing heparin worsens the reaction.
- B. Warfarin alone acutely risks warfarin-induced skin necrosis/limb gangrene.
- C. Platelet transfusion can fuel thrombosis and is generally avoided.

Question 145 · Correct Answer: A

Which electrolyte imbalance is MOST associated with prolonged QT interval?

Hypokalemia and hypomagnesemia are most associated with QT prolongation; magnesium is needed to correct refractory hypokalemia.

Why the other choices are less appropriate:

- B. Hyperkalemia widens QRS and peaks T-waves.
- C. Hypercalcemia shortens the QT.
- D. Hyponatremia does not prolong the QT.

Question 146 · Correct Answer: B

Stevens-Johnson Syndrome / TEN (Toxic Epidermal Necrolysis) requires:

SJS/TEN requires transfer to a burn center, meticulous wound care, and immediate discontinuation of the offending drug.

Why the other choices are less appropriate:

- A. Topical antibiotic cream alone is insufficient.
- C. Systemic steroids as primary therapy are controversial and not the mainstay.
- D. Antivirals are not the treatment for a drug-induced reaction.

Question 147 · Correct Answer: C

Myxedema coma is treated with:

Myxedema coma is treated with IV levothyroxine, stress-dose steroids (to cover coexisting adrenal insufficiency), and warming/supportive measures.

Why the other choices are less appropriate:

- A. Thyroidectomy is for hyperthyroidism.
- B. PTU treats hyperthyroidism.
- D. Radioactive iodine treats hyperthyroidism.

Question 148 · Correct Answer: D

Refeeding syndrome is characterized by hypophosphatemia because:

In refeeding syndrome, carbohydrate reintroduction triggers an insulin surge that shifts phosphate intracellularly, causing severe hypophosphatemia.

Why the other choices are less appropriate:

- A. Renal excretion is not the primary mechanism.
- B. The liver does not convert phosphate to glucose.
- C. Feeding solutions do contain phosphate; the issue is the intracellular shift.

Question 149 · Correct Answer: A

Which statement about CRRT anticoagulation is CORRECT?

Regional citrate anticoagulation chelates calcium within the CRRT circuit, minimizing systemic bleeding risk (with systemic calcium replacement).

Why the other choices are less appropriate:

- B. Heparin can be used systemically for CRRT.
- C. Some form of anticoagulation is usually needed to maintain circuit patency.
- D. LMWH is not the only acceptable agent.

Question 150 · Correct Answer: B

A patient receiving blood transfusion develops fever, rigors, hypotension, and flank pain 30 minutes into infusion. FIRST action is:

Fever, rigors, hypotension, and flank pain 30 minutes into transfusion indicate an acute hemolytic transfusion reaction; stop the transfusion immediately.

Why the other choices are less appropriate:

- A. Diphenhydramine and continuing is appropriate only for mild allergic reactions.
- C. Slowing the rate is insufficient for a hemolytic reaction.
- D. Acetaminophen treats febrile non-hemolytic reactions, not hemolysis.

Question 151 · Correct Answer: C

The Glasgow Coma Scale (GCS) scores:

The Glasgow Coma Scale scores eye opening (1-4), verbal response (1-5), and motor response (1-6) for a total of 3-15.

Why the other choices are less appropriate:

- A. Pupillary response is not a GCS component.
- B. It is not a 1-10 consciousness scale.
- D. It is not solely a deficit inventory.

Question 152 · Correct Answer: B

Cushing's Triad (sign of severe ICP elevation) consists of:

Cushing's Triad is hypertension with widened pulse pressure, bradycardia, and irregular respirations, signaling severely elevated ICP/impending herniation.

Why the other choices are less appropriate:

- A. Hypotension/tachycardia/tachypnea is the opposite pattern.
- C. Hypotension with apnea is not the classic triad.
- D. Normal BP with polyuria is unrelated.

Question 153 · Correct Answer: A

Ischemic stroke treatment: tPA should be given within:

IV tPA for ischemic stroke should be given within 3-4.5 hours of symptom onset (last known well time).

Why the other choices are less appropriate:

- B. 6 hours exceeds the IV tPA window (though thrombectomy windows are longer).
- C. 12 hours is outside the tPA window.
- D. 24 hours is outside the tPA window.

Question 154 · Correct Answer: B

A patient with ischemic stroke is NOT a candidate for tPA if:

tPA is contraindicated with uncontrollable BP >185/110, recent surgery, active bleeding, or INR >1.7.

Why the other choices are less appropriate:

- A. BP 170/95 is below the treatment-limiting threshold.
- C. Onset 2 hours ago is within the window.
- D. Glucose 160 is acceptable (must exclude hypoglycemia).

Question 155 · Correct Answer: C

Status epilepticus first-line treatment is:

First-line treatment of status epilepticus is an IV benzodiazepine (lorazepam or diazepam).

Why the other choices are less appropriate:

- A. Phenytoin is a second-line agent.
- B. Levetiracetam is second-line.
- D. Phenobarbital is later-line.

Question 156 · Correct Answer: D

Herniation syndrome - uncal herniation - presents with:

Uncal herniation compresses CN III, causing an ipsilateral fixed, dilated pupil with contralateral hemiplegia.

Why the other choices are less appropriate:

- A. Bilateral pinpoint pupils suggest pontine lesions/opioids.
- B. Isolated bilateral Babinski signs are nonspecific.
- C. Equal, reactive pupils are normal, not herniation.

Question 157 · Correct Answer: A

Normal intracranial pressure (ICP) is:

Normal intracranial pressure is 5-15 mmHg; treatment is generally initiated above 20-22 mmHg.

Why the other choices are less appropriate:

- B. 20-25 mmHg is elevated and warrants treatment.
- C. 25-35 mmHg is markedly elevated.
- D. <5 mmHg is below normal.

Question 158 · Correct Answer: B

In subarachnoid hemorrhage (SAH), the CLASSIC presenting symptom is:

Subarachnoid hemorrhage classically presents as a sudden, severe thunderclap headache described as the worst of life.

Why the other choices are less appropriate:

- A. Gradual unilateral headache is atypical for SAH.
- C. Nausea/vomiting alone is nonspecific.
- D. An isolated visual field defect without headache is not classic.

Question 159 · Correct Answer: C

Nimodipine is given after SAH to:

Nimodipine, a calcium channel blocker, is given after SAH to prevent vasospasm and reduce delayed neurological deficits.

Why the other choices are less appropriate:

- A. It is not primarily for cerebral edema.
- B. It does not treat the bleeding source.
- D. It does not directly lower ICP.

Question 160 · Correct Answer: D

Delirium in the ICU is BEST assessed using:

The CAM-ICU (Confusion Assessment Method for the ICU) is the validated tool for assessing delirium in ICU patients.

Why the other choices are less appropriate:

- A. The MMSE is not designed for intubated/critically ill patients.
- B. RASS measures sedation, not delirium.
- C. GCS measures consciousness, not delirium.

Question 161 · Correct Answer: A

A patient with traumatic brain injury (TBI) has ICP of 25 mmHg. Target CPP is:

TBI management targets CPP 60-70 mmHg to ensure adequate cerebral perfusion while avoiding hyperemia; $CPP = MAP - ICP$.

Why the other choices are less appropriate:

- B. 40-50 is too low and risks cerebral ischemia.
- C. 80-90 risks hyperemia/vasogenic edema and ARDS.
- D. >100 is excessive and harmful.

Question 162 · Correct Answer: B

CPP is calculated as:

Cerebral perfusion pressure = $MAP - ICP$.

Why the other choices are less appropriate:

- A. Adding ICP to MAP is incorrect.
- C. Uses SBP rather than MAP.
- D. CVP is not part of the CPP formula.

Question 163 · Correct Answer: C

Interventions to REDUCE ICP include:

ICP is lowered by HOB 30 degrees, normocapnia ($PaCO_2$ 35-40), osmotherapy (mannitol/hypertonic saline), and sedation.

Why the other choices are less appropriate:

- A. Trendelenburg raises ICP.
- B. Aggressive hyperventilation to $PaCO_2$ 20 causes ischemic vasoconstriction.
- D. Fluid boluses can worsen cerebral edema.

Question 164 · Correct Answer: D

Spinal cord injury at C4 - the nurse anticipates:

C4 injury impairs the phrenic nerve (C3-5) supplying the diaphragm, so the patient becomes ventilator dependent.

Why the other choices are less appropriate:

- A. Paraplegia with intact arms describes a thoracic lesion.
- B. Respiratory function is NOT intact at C4.
- C. C4 typically produces complete high tetraplegia.

Question 165 · Correct Answer: A

Neurogenic shock differs from other shock types by:

Neurogenic shock uniquely causes hypotension WITH bradycardia due to loss of sympathetic tone below the injury.

Why the other choices are less appropriate:

- B. SVR and BP are low, not high.
- C. Bradycardia, not tachycardia, is characteristic.
- D. CVP is typically low from venous pooling.

Question 166 · Correct Answer: B

A patient develops sudden severe headache, nausea, and loss of consciousness after a fall. CT shows hyperdense biconvex lens-shaped collection....

A biconvex (lens-shaped) hyperdense collection with a lucid interval indicates an epidural hematoma, usually from middle meningeal artery tear.

Why the other choices are less appropriate:

- A. Subdural appears crescent-shaped.
- C. SAH shows blood in sulci/cisterns.
- D. Intracerebral bleeds are within the parenchyma.

Question 167 · Correct Answer: C

The MOST common type of stroke is:

Ischemic stroke accounts for roughly 85% of all strokes.

Why the other choices are less appropriate:

- A. Hemorrhagic strokes are ~15%.
- B. SAH is a subset of hemorrhagic and less common.
- D. TIA is transient and not a completed stroke.

Question 168 · Correct Answer: D

Brain death criteria require ALL of the following EXCEPT:

Brain death requires irreversible coma, absent brainstem reflexes, and a positive apnea test; any response to pain excludes brain death.

Why the other choices are less appropriate:

- A. Irreversible coma IS required.
- B. Absent brainstem reflexes ARE required.
- C. A positive apnea test IS required.

Question 169 · Correct Answer: A

Alcohol withdrawal delirium tremens (DTs) peaks at:

Delirium tremens characteristically peaks 48-72 hours after the last drink and carries high mortality if untreated.

Why the other choices are less appropriate:

- B. 12-24 hours is typical of early withdrawal/tremulousness.
- C. One week is too late.
- D. Symptoms are not confined to the first 6 hours.

Question 170 · Correct Answer: B

CIWA-Ar score is used to assess:

The CIWA-Ar quantifies severity of alcohol withdrawal and guides symptom-triggered benzodiazepine dosing.

Why the other choices are less appropriate:

- A. It is not a cardiac delirium tool.
- C. Sedation is measured by RASS.
- D. Pain scales are separate.

Question 171 • Correct Answer: C

A patient with acute C5-C6 spinal cord injury develops hypertension (BP 220/110), bradycardia, and diaphoresis above the level of injury. This is:

Hypertension, bradycardia, and diaphoresis above the injury in a high SCI represent autonomic dysreflexia triggered by a noxious stimulus below the lesion.

Why the other choices are less appropriate:

- A. Neurogenic shock causes hypotension, not hypertension.
- B. Cushing response relates to raised ICP.
- D. It is directly related to the SCI.

Question 172 • Correct Answer: D

Autonomic dysreflexia FIRST treatment:

First treatment of autonomic dysreflexia is to sit the patient upright and find/remove the noxious stimulus (often bladder distension).

Why the other choices are less appropriate:

- A. Antihypertensives are used only if BP remains dangerously high after these steps.
- B. Trendelenburg worsens the hypertension.
- C. Nitroprusside is a later pharmacologic measure.

Question 173 • Correct Answer: A

Guillain-Barré syndrome is treated with:

Guillain-Barré syndrome is treated with IVIG or plasmapheresis.

Why the other choices are less appropriate:

- B. Corticosteroids are not effective in GBS.
- C. Antibiotics do not treat the autoimmune process.
- D. Antivirals are not indicated.

Question 174 • Correct Answer: B

Myasthenic crisis presents with:

Myasthenic crisis presents with respiratory muscle weakness and respiratory failure requiring ventilatory support.

Why the other choices are less appropriate:

- A. MG causes weakness, not hypertonia/hyperreflexia.
- C. Weakness is generalized including bulbar/respiratory muscles.
- D. Respiratory function is impaired, not normal.

Question 175 • Correct Answer: C

Decorticate posturing indicates injury at the level of:

Decorticate (flexor) posturing localizes to a lesion of the cerebral cortex or internal capsule above the brainstem.

Why the other choices are less appropriate:

- A. Brainstem lesions produce decerebrate posturing.
- B. Spinal cord level does not cause cortical posturing.
- D. Cerebellar lesions cause ataxia, not decortication.

Question 176 • Correct Answer: D

Decerebrate posturing indicates:

Decerebrate (extensor) posturing indicates midbrain/brainstem injury and carries a worse prognosis than decorticate.

Why the other choices are less appropriate:

- A. Cortical injury causes decorticate posturing.
- B. C3 spinal injury does not cause this posture.
- C. Cerebellar lesions cause ataxia.

Question 177 · Correct Answer: A

Phenytoin (Dilantin) therapeutic level is:

Therapeutic total phenytoin is 10-20 mcg/mL (free phenytoin 1-2 mcg/mL).

Why the other choices are less appropriate:

- B. 5-10 is subtherapeutic.
- C. 20-30 is toxic.
- D. <5 is subtherapeutic.

Question 178 · Correct Answer: B

Meningitis classic triad includes:

The classic meningitis triad is fever, nuchal rigidity, and altered mental status.

Why the other choices are less appropriate:

- A. Photophobia is common but not the classic triad member replacing AMS.
- C. Rash suggests meningococemia but is not the triad.
- D. These are shock/sepsis signs.

Question 179 · Correct Answer: C

A patient with bacterial meningitis is ordered dexamethasone. The PRIMARY reason is:

Dexamethasone in bacterial meningitis reduces inflammation and prevents neurologic complications such as hearing loss.

Why the other choices are less appropriate:

- A. Antibiotics treat the infection, not steroids.
- B. It does not treat DIC.
- D. It is not primarily an ICP-lowering agent.

Question 180 · Correct Answer: D

ICU delirium risk factors include:

ICU delirium risk factors include sleep deprivation, benzodiazepine use, immobility, pain, and sensory deprivation.

Why the other choices are less appropriate:

- A. Young age and normal sleep are protective.
- B. Delirium is multifactorial, not only alcohol withdrawal.
- C. Sedation-free mobility reduces risk.

Question 181 · Correct Answer: A

RASS score of -3 means:

RASS -3 is moderate sedation: eyes open to voice without eye contact.

Why the other choices are less appropriate:

- B. Alert and calm is RASS 0.
- C. Unarousable is RASS -5.
- D. Agitated/pulling lines is a positive RASS.

Question 182 · Correct Answer: B

Which antidepressant is associated with serotonin syndrome in overdose?

SSRIs (e.g., fluoxetine, sertraline), especially combined with MAOIs, cause serotonin syndrome.

Why the other choices are less appropriate:

- A. Haloperidol relates to NMS.
- C. Benzodiazepines do not cause serotonin syndrome.
- D. Beta blockers are unrelated.

Question 183 · Correct Answer: C

Serotonin syndrome classic triad:

The serotonin syndrome triad is hyperthermia, neuromuscular abnormalities (clonus/rigidity), and altered mental status/agitation.

Why the other choices are less appropriate:

- A. These describe opioid/hypothermic states.
- B. Sedation/miosis/respiratory depression is opioid toxidrome.
- D. Autonomic signs alone are incomplete.

Question 184 · Correct Answer: D

A patient in the ICU is expressing suicidal ideation. The nurse's FIRST action is:

The first action for suicidal ideation is ensuring environmental safety, removing harmful objects, and maintaining constant observation.

Why the other choices are less appropriate:

- A. Restraint is not the initial appropriate response.
- B. Sedation is not first-line.
- C. Delaying notification is unsafe.

Question 185 · Correct Answer: A

Transient Ischemic Attack (TIA) is defined by neurological deficits that resolve within:

A TIA produces neurologic deficits that resolve within 24 hours with no infarction on imaging.

Why the other choices are less appropriate:

- B. 72 hours exceeds the definition.
- C. 48 hours exceeds it.
- D. One week indicates a completed stroke.

Question 186 · Correct Answer: B

The NIHSS (NIH Stroke Scale) is used to:

The NIHSS quantifies stroke-related neurologic deficits; a higher score indicates greater severity.

Why the other choices are less appropriate:

- A. SAH grading uses Hunt-Hess/Fisher.
- C. ICP is monitored by other devices.
- D. Withdrawal is assessed by CIWA-Ar.

Question 187 · Correct Answer: C

A patient with a skull fracture has clear fluid draining from the nose. The nurse suspects:

Clear nasal drainage after skull fracture suggests CSF rhinorrhea; do not insert an NG tube and notify the physician/neurosurgery.

Why the other choices are less appropriate:

- A. Sinusitis does not follow skull fracture this way.
- B. It is not normal drainage.
- D. It is not an allergic reaction.

Question 188 · Correct Answer: D

Mannitol is given for increased ICP. The nurse MONITORS for:

Monitor serum osmolality (>320 mOsm/kg indicates toxicity), urine output, and electrolytes when giving mannitol.

Why the other choices are less appropriate:

- A. Mannitol does not cause hypoglycemia.
- B. Coagulation is not the main concern.
- C. Bradycardia is not the typical monitoring focus.

Question 189 · Correct Answer: B

Wernicke's encephalopathy is caused by:

Wernicke encephalopathy results from thiamine (B1) deficiency; give IV thiamine before glucose.

Why the other choices are less appropriate:

- A. Folate deficiency causes anemia.
- C. B12 deficiency causes subacute combined degeneration.
- D. Magnesium deficiency is not the cause.

Question 190 · Correct Answer: B

Target temperature management (TTM) after cardiac arrest targets core temperature of:

Targeted temperature management after cardiac arrest maintains core temperature 32-36 C for 24 hours with gradual rewarming.

Why the other choices are less appropriate:

- A. 38-39 is hyperthermia and harmful.
- C. 30-32 for 48 hours is too cold/long.
- D. 36-37 for 12 hours is not the standard protocol.

Question 191 · Correct Answer: C

Fat embolism syndrome after long bone fracture presents with:

Fat embolism syndrome classically presents with the triad of hypoxia, petechiae, and confusion after long bone fracture.

Why the other choices are less appropriate:

- A. It is more than isolated respiratory failure.
- B. It is systemic, not local pain.
- D. Liver failure/coagulopathy is not the classic picture.

Question 192 · Correct Answer: D

Rhabdomyolysis is associated with MARKEDLY elevated:

Rhabdomyolysis causes markedly elevated CK (CPK), often >10,000 U/L, with myoglobinuria and AKI risk.

Why the other choices are less appropriate:

- A. Troponin is cardiac-specific.
- B. D-dimer reflects thrombosis/DIC.
- C. ALT/AST rise is nonspecific and less marked.

Question 193 · Correct Answer: A

Treatment for rhabdomyolysis focuses on:

Rhabdomyolysis treatment centers on aggressive IV fluid resuscitation to maintain high urine output and flush myoglobin.

Why the other choices are less appropriate:

- B. Loop diuretics are not first-line and can worsen output goals.
- C. Dialysis is reserved for refractory cases.
- D. Transfusion is not indicated.

Question 194 · Correct Answer: B

A patient with C2 spinal cord injury is at GREATEST risk for:

C2 injury is above the diaphragmatic innervation (C3-5), causing respiratory failure requiring mechanical ventilation.

Why the other choices are less appropriate:

- A. Risk far exceeds urinary issues alone.
- C. It is not limited to the lower extremities.
- D. Dysreflexia is a later complication, not the greatest immediate risk.

Question 195 · Correct Answer: C

Post-traumatic stress disorder (PTSD) in ICU survivors is BEST prevented by:

ICU-related PTSD is best prevented with ICU diaries, family inclusion, sleep promotion, early mobility, and avoiding unnecessary sedation.

Why the other choices are less appropriate:

- A. Visiting restrictions worsen outcomes.
- B. Benzodiazepines increase delirium/PTSD.
- D. Amnesia-inducing drugs are not protective.

Question 196 · Correct Answer: D

A patient is postictal after a grand mal seizure. Priority nursing action:

Postictal priority is airway protection, side-lying positioning, oxygen, safety, and monitoring for recurrent seizures.

Why the other choices are less appropriate:

- A. Forcing an oral airway during/after a seizure can injure.
- B. Phenytoin is not the immediate postictal priority.
- C. Restraint can cause injury.

Question 197 · Correct Answer: A

Dexmedetomidine (Precedex) has the advantage over propofol in ICU sedation because:

Dexmedetomidine preserves respiratory drive and is associated with less delirium than propofol/benzodiazepines.

Why the other choices are less appropriate:

- B. It provides less amnesia than propofol.
- C. It is generally more expensive.
- D. Onset is not its main advantage.

Question 198 · Correct Answer: B

Pain assessment in non-verbal ICU patients is BEST done using:

Non-verbal ICU pain is best assessed with the Behavioral Pain Scale (BPS) or CPOT.

Why the other choices are less appropriate:

- A. Self-report is impossible in non-verbal patients.
- C. Vital signs alone are unreliable.
- D. Pupillary changes are not validated pain tools.

Question 199 · Correct Answer: C

A patient receiving enteral tube feeding develops high gastric residual volumes (>500 mL). FIRST action:

For high gastric residual volumes, hold the feed temporarily, reassess, and consider a prokinetic such as metoclopramide.

Why the other choices are less appropriate:

- A. Permanent cessation is not warranted.
- B. Increasing the rate worsens intolerance.
- D. TPN is not the immediate step.

Question 200 · Correct Answer: D

Which intervention is associated with REDUCED delirium in the ICU?

Implementing the ABCDEF bundle (awakening, breathing trials, mobility, family engagement) reduces ICU delirium.

Why the other choices are less appropriate:

- A. Continued benzodiazepines increase delirium.
- B. Minimizing family increases delirium.
- C. Restraints increase delirium.

Question 201 · Correct Answer: A

Sepsis is defined as:

Sepsis-3 defines sepsis as life-threatening organ dysfunction caused by a dysregulated host response to infection.

Why the other choices are less appropriate:

- B. Positive cultures are not required.
- C. SIRS alone is nonspecific.
- D. Fever/WBC/source is the older definition.

Question 202 · Correct Answer: B

Septic shock differs from sepsis by:

Septic shock is sepsis requiring vasopressors to keep MAP ≥ 65 plus lactate > 2 mmol/L despite adequate fluids.

Why the other choices are less appropriate:

- A. A positive culture is not the distinguishing feature.
- C. SIRS criteria are outdated.
- D. WBC count does not define shock.

Question 203 · Correct Answer: C

Sepsis Hour-1 Bundle includes:

The Hour-1 Bundle: measure lactate, obtain blood cultures before antibiotics, give broad-spectrum antibiotics, 30 mL/kg crystalloid for hypotension or lactate ≥ 4 , and vasopressors for MAP < 65 .

Why the other choices are less appropriate:

- A. Diuresis is not part of the bundle.
- B. Steroids/vasopressin alone are not the bundle.
- D. CVP monitoring is not a bundle element.

Question 204 · Correct Answer: D

MODS (Multiple Organ Dysfunction Syndrome) involves:

MODS is progressive dysfunction of two or more organ systems, often respiratory first, then renal, hepatic, cardiovascular, and CNS.

Why the other choices are less appropriate:

- A. Single-organ failure is not MODS.
- B. Coagulopathy alone is not MODS.
- C. It is defined by organ dysfunction, not organism count.

Question 205 · Correct Answer: A

SIRS criteria (2 of 4 required) include:

SIRS requires 2 of 4: abnormal temperature, leukocyte abnormality, tachycardia, and tachypnea.

Why the other choices are less appropriate:

- B. Positive culture is not a SIRS criterion.
- C. These specific cutoffs are not the SIRS set.
- D. Lactate/source are not SIRS criteria.

Question 206 · Correct Answer: B

The qSOFA score for screening sepsis in non-ICU settings uses:

qSOFA uses altered mental status, RR ≥ 22 , and SBP ≤ 100 ; a score ≥ 2 raises suspicion for sepsis outside the ICU.

Why the other choices are less appropriate:

- A. WBC/temperature are not qSOFA components.
- C. Lactate/HR are not qSOFA.
- D. GCS/temp/WBC are not the qSOFA triad.

Question 207 · Correct Answer: C

Burns: Rule of Nines assigns the ENTIRE anterior trunk as:

By the Rule of Nines, the entire anterior trunk equals 18%.

Why the other choices are less appropriate:

- A. 9% is one arm or the head.
- B. 27% is not a Rule of Nines segment.
- D. 36% overestimates the anterior trunk.

Question 208 · Correct Answer: D

Carbon monoxide poisoning is treated with:

Carbon monoxide poisoning is treated with 100% oxygen via non-rebreather or intubation, with hyperbaric oxygen considered in severe cases.

Why the other choices are less appropriate:

- A. Hydroxocobalamin treats cyanide, not CO.
- B. Low-flow oxygen is inadequate.
- C. Sodium thiosulfate treats cyanide.

Question 209 · Correct Answer: A

In a patient with anaphylactic shock, the FIRST-line drug is:

First-line for anaphylactic shock is epinephrine 0.3-0.5 mg IM in the anterolateral thigh.

Why the other choices are less appropriate:

- B. Diphenhydramine is adjunctive.
- C. Corticosteroids are adjunctive.
- D. Fluids support but do not replace epinephrine.

Question 210 · Correct Answer: B

Hypovolemic shock classification: Class III represents blood loss of approximately:

Class III hemorrhage is roughly 1500-2000 mL (30-40% blood volume) with significant hemodynamic changes.

Why the other choices are less appropriate:

- A. <750 mL is Class I.
- C. 750-1500 mL is Class II.
- D. <15% is Class I.

Question 211 · Correct Answer: B

Distributive shock is characterized by:

Distributive shock is characterized by low SVR (vasodilation) with high or normal CO; it includes septic, neurogenic, and anaphylactic shock.

Why the other choices are less appropriate:

- A. High SVR/low CO describes cardiogenic.
- C. High CVP/low CO suggests obstructive/cardiogenic.
- D. Low CO/high SVR/cold extremities describes cardiogenic.

Question 212 · Correct Answer: D

Obstructive shock causes include:

Obstructive shock is caused by mechanical obstruction to flow, such as tension pneumothorax, cardiac tamponade, or massive PE.

Why the other choices are less appropriate:

- A. Hypovolemia is hypovolemic shock.
- B. Anaphylaxis is distributive.
- C. MI causes cardiogenic shock.

Question 213 · Correct Answer: B

Beck's Triad (cardiac tamponade) includes:

Beck's triad of cardiac tamponade is hypotension, muffled heart sounds, and jugular venous distension.

Why the other choices are less appropriate:

- A. Hypertension/bradycardia is not Beck's triad.
- C. Tachycardia/fever/chest pain is nonspecific.
- D. Cyanosis/tachypnea/low SpO₂ are not Beck's triad.

Question 214 · Correct Answer: B

Pulsus paradoxus is MOST associated with:

Pulsus paradoxus (>10 mmHg inspiratory drop in SBP) is most associated with cardiac tamponade.

Why the other choices are less appropriate:

- A. Aortic stenosis causes pulsus parvus et tardus.
- C. MR is not a classic cause.
- D. Hypertensive crisis does not cause it.

Question 215 · Correct Answer: C

Damage control resuscitation in massive hemorrhage uses:

Damage control resuscitation uses a balanced 1:1:1 ratio of PRBCs:FFP:platelets plus TXA.

Why the other choices are less appropriate:

- A. Large-volume crystalloid worsens coagulopathy.
- B. Saline boluses are not the strategy.
- D. Colloids are not first-line in hemorrhage.

Question 216 · Correct Answer: D

Massive transfusion is defined as:

Massive transfusion is ≥ 10 units of PRBCs in 24 hours or replacement of the entire blood volume in 24 hours.

Why the other choices are less appropriate:

- A. >5 units is below the definition.
- B. 2 units in 1 hour is not massive transfusion.
- C. Any ICU transfusion is not the definition.

Question 217 · Correct Answer: A

The Braden Scale assesses:

The Braden Scale assesses pressure injury risk across sensory perception, moisture, activity, mobility, nutrition, and friction/shear.

Why the other choices are less appropriate:

- B. DVT risk is scored differently.
- C. Sepsis severity uses SOFA.
- D. Falls use Morse/Hendrich scales.

Question 218 · Correct Answer: B

Which intervention is PRIORITY in preventing pressure injuries in critically ill patients?

Priority pressure injury prevention is repositioning every 2 hours with skin assessment and pressure-relieving surfaces.

Why the other choices are less appropriate:

- A. Debridement treats existing wounds, not prevention.
- C. Nutrition alone is insufficient.
- D. Barrier cream alone is insufficient.

Question 219 · Correct Answer: C

PICS (Post-Intensive Care Syndrome) refers to:

PICS refers to physical, cognitive, and mental health impairments persisting after critical illness.

Why the other choices are less appropriate:

- A. It is not an ICU-acquired infection.
- B. It is not a single post-discharge infection.
- D. Provider PTSD is PICS-Family/burnout, not PICS itself.

Question 220 · Correct Answer: D

Eclampsia is differentiated from severe preeclampsia by:

Eclampsia is distinguished from severe preeclampsia by the onset of grand mal (tonic-clonic) seizures.

Why the other choices are less appropriate:

- A. BP level alone does not define eclampsia.
- B. HELLP is a separate variant.
- C. Proteinuria is present in preeclampsia too.

Question 221 · Correct Answer: A

HELLP syndrome stands for:

HELLP stands for Hemolysis, Elevated Liver enzymes, and Low Platelets.

Why the other choices are less appropriate:

- B. Not heart failure/potassium.
- C. Not the correct expansion.
- D. Not lipids/phosphate.

Question 222 · Correct Answer: B

Magnesium sulfate in eclampsia is used to:

Magnesium sulfate in eclampsia is used to prevent and treat seizures.

Why the other choices are less appropriate:

- A. It is not primarily an antihypertensive.
- C. It is not given for fetal lung maturity (that is betamethasone).
- D. It does not treat HELLP coagulopathy.

Question 223 · Correct Answer: C

Toxicity from magnesium sulfate is FIRST manifested by:

Magnesium toxicity first manifests as loss of deep tendon reflexes, followed by respiratory depression.

Why the other choices are less appropriate:

- A. Respiratory arrest is a later sign.
- B. Bradycardia is not the earliest sign.
- D. Pupil changes are not characteristic.

Question 224 · Correct Answer: D

Antidote for magnesium toxicity:

The antidote for magnesium sulfate toxicity is IV calcium gluconate.

Why the other choices are less appropriate:

- A. Bicarbonate is not the antidote.
- B. Flumazenil reverses benzodiazepines.
- C. Naloxone reverses opioids.

Question 225 · Correct Answer: A

A patient with obesity presents with hypoxia, hypercapnia, and polycythemia. The likely diagnosis is:

Obesity with hypoxia, hypercapnia, and polycythemia describes obesity hypoventilation (Pickwickian) syndrome.

Why the other choices are less appropriate:

- B. ARDS is acute with bilateral infiltrates.
- C. PE is acute and not polycythemia-defined.
- D. COPD is not defined by obesity.

Question 226 · Correct Answer: B

Acute adrenal insufficiency precipitated by stopping chronic steroids is treated with:

Acute adrenal insufficiency is treated with IV hydrocortisone 100 mg bolus, then every 6-8 hours, plus fluids/glucose.

Why the other choices are less appropriate:

- A. Oral prednisone is inadequate in crisis.
- C. Dexamethasone lacks mineralocorticoid effect and is second-choice.
- D. Mineralocorticoid alone is insufficient.

Question 227 · Correct Answer: C

In septic shock, the target MAP is:

The target MAP in septic shock is ≥ 65 mmHg.

Why the other choices are less appropriate:

- A. ≥ 60 is below the recommended target.
- B. ≥ 70 is not the standard threshold.
- D. ≥ 80 is not routinely targeted even with prior HTN.

Question 228 · Correct Answer: D

Point-of-care ultrasound (POCUS) in critical care is used for:

POCUS is used at the bedside for cardiac, lung, vascular (IVC volume status), and abdominal assessment.

Why the other choices are less appropriate:

- A. It is not limited to cardiac.
- B. It is not limited to DVT.
- C. It is not limited to vascular access.

Question 229 · Correct Answer: A

A patient with severe sepsis has lactate of 5.0 mmol/L after 2 hours. This indicates:

A persistently elevated lactate (5.0 after 2 hours) indicates ongoing tissue hypoperfusion and the need to escalate treatment.

Why the other choices are less appropriate:

- B. It does not indicate adequate resuscitation.
- C. It is not a normal response.
- D. Liver failure is not the assumed cause in sepsis.

Question 230 · Correct Answer: B

Procalcitonin is used in critical care to:

Procalcitonin guides antibiotic therapy: it rises with bacterial infection and declining levels support de-escalation.

Why the other choices are less appropriate:

- A. It does not diagnose all infections.
- C. It does not monitor renal function.
- D. It does not assess fluid status.

Question 231 · Correct Answer: C

Ventilator-associated events (VAEs) are BEST prevented by:

VAEs are best prevented with the VAP bundle plus spontaneous awakening/breathing trials and early mobility.

Why the other choices are less appropriate:

- A. More sedation increases ventilator days and risk.
- B. High PEEP alone does not prevent VAE.
- D. Routine bronchoscopy is not preventive.

Question 232 · Correct Answer: D

A patient develops fever, rash, and eosinophilia 2 weeks after antibiotic initiation. MOST likely:

Fever, rash, and eosinophilia weeks after starting an antibiotic suggests DRESS syndrome.

Why the other choices are less appropriate:

- A. A new infection would not produce eosinophilia this way.
- B. Sepsis does not typically cause eosinophilia.
- C. IV fluid allergy is not the classic picture.

Question 233 · Correct Answer: A

Toxic shock syndrome (TSS) is caused by:

Toxic shock syndrome is caused by *Staphylococcus aureus* or *Streptococcal* superantigens driving massive cytokine release.

Why the other choices are less appropriate:

- B. Gram-negative organisms are not the classic cause.
- C. It is not viral.
- D. *Candida* is not the typical cause.

Question 234 · Correct Answer: B

Pain management in critically ill patients should follow the:

Pain management in the critically ill follows the PAD guidelines: analgesia first, then sedation.

Why the other choices are less appropriate:

- A. Sedation-first is discouraged.
- C. Routine PRN morphine alone is inadequate.
- D. Opioids are used appropriately in the ICU.

Question 235 · Correct Answer: C

A 'pain-first' or 'analgo-sedation' approach in ICU means:

Analgo-sedation (pain-first) means treating pain with analgesics before adding sedatives.

Why the other choices are less appropriate:

- A. It is not purely non-pharmacologic.
- B. It does not sedate first.
- D. It does not avoid opioids.

Question 236 · Correct Answer: D

Tranexamic acid (TXA) is used in trauma for:

TXA reduces mortality from traumatic hemorrhage when given within 3 hours of injury.

Why the other choices are less appropriate:

- A. It does not prevent infection.
- B. It does not reverse anticoagulants.
- C. It is given early, not to treat post-transfusion coagulopathy.

Question 237 · Correct Answer: A

Early enteral nutrition in critical illness is associated with:

Early enteral nutrition reduces gut mucosal atrophy, maintains immune function, and lowers infection rates.

Why the other choices are less appropriate:

- B. It reduces, not increases, infection.
- C. It does not inherently worsen glycemia when managed.
- D. With proper positioning aspiration risk is managed.

Question 238 · Correct Answer: B

Healthcare-associated infections (HAIs) are BEST prevented by:

HAIs are best prevented by hand hygiene, standard/transmission-based precautions, and bundle compliance.

Why the other choices are less appropriate:

- A. Prophylactic antibiotics for all promote resistance.
- C. Visitor restrictions are not the primary measure.
- D. Routine air cultures are not preventive.

Question 239 · Correct Answer: C

A patient with end-stage heart failure expresses desire to stop all interventions. The nurse's PRIORITY:

The priority is to facilitate a goals-of-care discussion, notify the physician, involve palliative care, and document the patient's wishes.

Why the other choices are less appropriate:

- A. Coercing the patient violates autonomy.
- B. Continuing all treatment ignores the patient's wishes.
- D. Ethics consult is not required before honoring an autonomous decision.

Question 240 · Correct Answer: D

Palliative care in ICU is characterized by:

Palliative care in the ICU focuses on quality of life and symptom management and can be provided alongside curative treatment.

Why the other choices are less appropriate:

- A. It is not withdrawal of all care.
- B. It is not limited to end of life.
- C. It is not synonymous with hospice.

Question 241 · Correct Answer: A

Which type of shock presents with HIGH cardiac output and LOW SVR?

Distributive shock (septic, anaphylactic, neurogenic) causes massive vasodilation, producing low SVR with high or normal cardiac output.

Why the other choices are less appropriate:

- B. Hypovolemic shock: low preload gives low CO and high compensatory SVR.
- C. Cardiogenic shock: pump failure yields low CO and high SVR.
- D. Obstructive shock: mechanical obstruction lowers CO with high SVR.

Question 242 · Correct Answer: B

Submersion injury (near-drowning) requires observation for how long?

Submersion victims need at least 6-8 hours of observation because delayed pulmonary edema/ARDS (secondary drowning) can develop hours after the event.

Why the other choices are less appropriate:

- A. One hour is insufficient to detect delayed lung injury.
- C. Freshwater vs saltwater does not change the observation requirement.
- D. All submersion patients need observation, not only the unconscious.

Question 243 · Correct Answer: C

A trauma patient has increasing abdominal girth, hypotension, and absent bowel sounds after blunt abdominal trauma. PRIORITY: Increasing abdominal girth, hypotension, and absent bowel sounds after blunt trauma signal intraperitoneal hemorrhage, which is a surgical emergency requiring immediate consult.

Why the other choices are less appropriate:

- A. NG tube does not address active bleeding.
- B. Observation alone risks exsanguination.
- D. Head CT is irrelevant to the abdominal source of shock.

Question 244 · Correct Answer: D

Hypothermia (core temperature <35 degrees C) in a trauma patient causes:

Hypothermia forms the lethal triad with acidosis and coagulopathy; each element worsens the others and increases trauma mortality.

Why the other choices are less appropriate:

- A. Hypothermia impairs, not improves, coagulation.
- B. Cold shifts the oxyhemoglobin curve left, worsening tissue oxygen delivery.
- C. Severe hypothermia depresses heart rate rather than sustaining tachycardia.

Question 245 · Correct Answer: A

Systemic inflammatory response syndrome (SIRS) without infection is called:

SIRS meeting criteria without an infectious source is non-infectious SIRS, seen in pancreatitis, burns, trauma, and major surgery.

Why the other choices are less appropriate:

- B. Sepsis requires a documented or suspected infection.
- C. Septic shock adds vasopressor-dependent hypotension and lactate elevation.
- D. Bacteremia is viable bacteria in the blood, an infectious finding.

Question 246 · Correct Answer: B

Proning in ARDS is indicated when P/F ratio is:

The PROSEVA trial demonstrated mortality benefit of prone positioning in severe ARDS with P/F ratio <150 (proned $\geq$ 16 hrs/day).

Why the other choices are less appropriate:

- A. P/F >300 is not ARDS.
- C. P/F <200 is moderate ARDS but not the proning threshold.
- D. P/F <250 is not the evidence-based cutoff.

Question 247 · Correct Answer: C

What is the MOST sensitive early sign of deterioration in a critically ill patient?

A change in level of consciousness/mental status is the earliest and most sensitive sign of clinical deterioration, often preceding vital sign changes.

Why the other choices are less appropriate:

- A. Falling blood pressure is a late compensatory failure.
- B. Fever is nonspecific and not the earliest sign.
- D. Falling SpO₂ typically follows earlier neurologic and perfusion changes.

Question 248 · Correct Answer: D

A patient with suspected CO poisoning has SpO₂ 98% by pulse oximetry. The nurse knows:

Pulse oximetry cannot distinguish carboxyhemoglobin from oxyhemoglobin, so SpO₂ reads falsely normal; ABG with co-oximetry is required to measure COHb.

Why the other choices are less appropriate:

- A. A normal SpO₂ does not rule out CO poisoning.
- B. SpO₂ 98% is misleading in CO exposure.
- C. CO poisoning requires intervention regardless of the pulse ox reading.

Question 249 · Correct Answer: A

Thermoregulatory failure in heat stroke requires PRIORITY intervention of:

Heat stroke reflects hypothalamic thermoregulatory failure, so rapid external/internal cooling is the priority; antipyretics that act on prostaglandins are ineffective.

Why the other choices are less appropriate:

- B. Antipyretics do not work when the set point mechanism has failed.
- C. Antibiotics do not treat hyperthermia.
- D. Fluid restriction worsens hypoperfusion; patients often need fluids.

Question 250 · Correct Answer: B

Failure to thrive in the ICU patient is BEST addressed by:

ICU failure to thrive is best addressed with a comprehensive multidisciplinary assessment of nutrition, mobility, psychological, palliative, and social needs.

Why the other choices are less appropriate:

- A. Increasing sedation worsens deconditioning and delirium.
- C. Reducing family visitation removes valuable support.
- D. Stopping medications indiscriminately is not a targeted intervention.

Question 251 · Correct Answer: C

The Synergy Model for Patient Care was developed by:

The Synergy Model for Patient Care was developed by the AACN (American Association of Critical-Care Nurses) and underpins CCRN certification.

Why the other choices are less appropriate:

- A. The ANA authored the Code of Ethics and scope/standards, not the Synergy Model.
- B. JCAHO (now The Joint Commission) sets accreditation standards.
- D. CMS is a federal payer/regulatory agency.

Question 252 · Correct Answer: D

In the Synergy Model, patient characteristics include:

The eight Synergy patient characteristics are resiliency, vulnerability, stability, complexity, resource availability, participation in care, participation in decision-making, and predictability.

Why the other choices are less appropriate:

- A. Clinical judgment and advocacy are nurse competencies, not patient characteristics.
- B. Demographics alone are incomplete.
- C. Physiological status alone omits the psychosocial dimensions.

Question 253 · Correct Answer: A

In the Synergy Model, 'resiliency' refers to:

Resiliency is the patient's capacity to return to a restorative level of functioning using compensatory and coping mechanisms after illness or adversity.

Why the other choices are less appropriate:

- B. Number of support systems relates to resource availability.
- C. Physiologic stability is a separate characteristic.
- D. Predictability describes the expectedness of the illness course.

Question 254 · Correct Answer: B

'Vulnerability' as a patient characteristic in the Synergy Model means:

Vulnerability is susceptibility to actual or potential stressors that may adversely affect patient outcomes.

Why the other choices are less appropriate:

- A. Emotional state alone does not define vulnerability.
- C. Ability to participate in decisions is a distinct characteristic.
- D. Social support is part of resource availability.

Question 255 · Correct Answer: C

The nurse competency of 'Clinical Judgment' in the Synergy Model involves:

Clinical judgment is clinical reasoning that integrates assessment, pattern recognition, decision-making, and evaluation grounded in knowledge and experience.

Why the other choices are less appropriate:

- A. Following orders accurately is task completion, not clinical judgment.
- B. Teaching is facilitation of learning.
- D. Coordinating with disciplines is collaboration.

Question 256 · Correct Answer: D

'Facilitation of Learning' in the Synergy Model is best demonstrated when a nurse:

Facilitation of learning is demonstrated when the nurse teaches the patient and family about diagnosis, treatment, and self-care based on their learning needs.

Why the other choices are less appropriate:

- A. Correct medication administration is a technical task.
- B. Working with the physician is collaboration.
- C. Completing paperwork is documentation.

Question 257 · Correct Answer: A

'Advocacy/Moral Agency' competency in the Synergy Model means the nurse:

Advocacy/Moral Agency means acting on behalf of the patient's interests, serving as a moral agent, and navigating ethical conflicts.

Why the other choices are less appropriate:

- B. Avoiding conflict abandons the advocacy role.
- C. Following policy unquestioningly is the opposite of moral agency.
- D. Avoiding ethical discussion fails the advocacy duty.

Question 258 · Correct Answer: B

A patient's family requests continued aggressive treatment for a brain-dead patient. The nurse's BEST response is:

The best response is to facilitate a family meeting with the physician and palliative care to explore goals and provide accurate information, supporting the family through the loss.

Why the other choices are less appropriate:

- A. Withdrawing care unilaterally exceeds the nurse's authority.
- C. A blunt dismissal is not therapeutic or compassionate.
- D. Documenting and doing nothing abandons the family.

Question 259 · Correct Answer: C

Informed consent requires:

Valid informed consent requires disclosure of the procedure/risks/benefits/alternatives, voluntary agreement, and decision-making capacity.

Why the other choices are less appropriate:

- A. A signature without understanding is not informed consent.
- B. The physician provides information but does not consent for the patient.
- D. Competent adults consent for themselves, not the family.

Question 260 · Correct Answer: D

A patient has a DNR order. They develop an arrhythmia. The nurse should:

A DNR order means no CPR/resuscitation; the nurse continues monitoring and comfort measures and does not initiate resuscitative interventions.

Why the other choices are less appropriate:

- A. DNR applies to arrhythmias requiring resuscitation.
- B. The DNR order already directs care; no need to ask family first.
- C. Defibrillation and ACLS drugs are resuscitation, which the DNR prohibits.

Question 261 · Correct Answer: A

'Collaboration' in the Synergy Model involves:

Collaboration means working with the interdisciplinary team, patient, and family to achieve optimal patient outcomes.

Why the other choices are less appropriate:

- B. Working in isolation is the opposite of collaboration.
- C. Nursing-only teamwork is incomplete.
- D. Deferring all decisions abandons the nurse's collaborative voice.

Question 262 · Correct Answer: B

'Systems Thinking' competency means the nurse:

Systems thinking is seeing the patient within the entire healthcare system, identifying resources, and navigating the system for the patient's benefit.

Why the other choices are less appropriate:

- A. Understanding only one's own unit is too narrow.
- C. Following chain of command alone is not systems thinking.
- D. Budget management is an administrative task.

Question 263 · Correct Answer: C

'Response to Diversity' competency requires the nurse to:

Response to diversity requires recognizing and incorporating cultural, spiritual, gender, and lifestyle differences into individualized care plans.

Why the other choices are less appropriate:

- A. Treating everyone the same ignores individual needs.
- B. Following protocols alone does not address diversity.
- D. Asking only about religion is too limited.

Question 264 · Correct Answer: D

'Clinical Inquiry' competency is BEST exemplified by a nurse who:

Clinical inquiry is exemplified by questioning current practice, seeking evidence, participating in research, and integrating new knowledge into care.

Why the other choices are less appropriate:

- A. Reading only policies does not challenge practice.
- B. Delegating clinical decisions abandons inquiry.
- C. Avoiding challenge to the status quo is the opposite of clinical inquiry.

Question 265 · Correct Answer: A

A patient with terminal diagnosis refuses further treatment. The nurse's ETHICAL obligation is:

The nurse must respect patient autonomy: ensure the refusal is informed and competent, document it, and provide comfort care.

Why the other choices are less appropriate:

- B. Overriding a competent refusal violates autonomy.
- C. Ethics consult is not required before honoring a competent choice.
- D. The competent patient, not the family, decides.

Question 266 · Correct Answer: B

The principle of 'non-maleficence' in nursing ethics means:

Non-maleficence is the duty to do no harm and avoid actions that cause unnecessary harm or injury.

Why the other choices are less appropriate:

- A. Doing good is beneficence.
- C. Fair distribution is justice.
- D. Respecting decisions is autonomy.

Question 267 · Correct Answer: B

The principle of 'beneficence' means:

Beneficence means acting in the patient's best interest and actively promoting well-being.

Why the other choices are less appropriate:

- A. Avoiding harm is non-maleficence.
- C. Fair distribution is justice.
- D. Truthfulness is veracity.

Question 268 · Correct Answer: D

Justice in healthcare ethics refers to:

Justice refers to fair and equitable distribution of resources and care without discrimination.

Why the other choices are less appropriate:

- A. Following policy is not the ethical principle of justice.
- B. Non-maleficence is do-no-harm.
- C. Autonomy is self-determination.

Question 269 · Correct Answer: A

A nurse witnesses a colleague administering medication without verifying the 5 rights. The ETHICAL action is:

Patient safety and professional accountability require addressing the colleague directly and reporting per facility policy when the 5 rights are not verified.

Why the other choices are less appropriate:

- B. Ignoring it endangers the patient.
- C. Waiting for harm before acting is unethical.
- D. Reporting only if harm occurs delays a safety intervention.

Question 270 · Correct Answer: B

A patient's surrogate decision-maker is refusing a blood transfusion for an unconscious critically ill patient. The ethical framework the nurse...

For an unconscious patient, the ethical framework is substituted judgment (what the patient would have wanted); an ethics committee consult helps resolve the conflict.

Why the other choices are less appropriate:

- A. Transfusing on beneficence alone ignores the patient's known wishes.
- C. Paternalism disregards patient autonomy.
- D. Following family without scrutiny may not reflect the patient's wishes.

Question 271 • Correct Answer: C

'Caring practices' in the Synergy Model focuses on:

Caring practices focus on creating a compassionate, supportive, therapeutic environment that promotes healing and preserves dignity.

Why the other choices are less appropriate:

- A. Technical skills alone are not caring practices.
- B. Medication accuracy is a task.
- D. Rigid policy adherence is not the essence of caring.

Question 272 • Correct Answer: D

AACN's Healthy Work Environment (HWE) standards include:

AACN's Healthy Work Environment standards are skilled communication, true collaboration, effective decision-making, meaningful recognition, authentic leadership, and appropriate staffing.

Why the other choices are less appropriate:

- A. Mandatory overtime and rigid hierarchy oppose a healthy environment.
- B. Administration-only ratios exclude appropriate staffing collaboration.
- C. Silent units contradict skilled communication.

Question 273 • Correct Answer: A

Moral distress in critical care nurses occurs when:

Moral distress occurs when the nurse knows the ethically right action but is constrained from taking it by institutional, authority, or situational barriers.

Why the other choices are less appropriate:

- B. Disagreeing with lifestyle choices is a values difference, not moral distress.
- C. Feeling overworked is burnout, not moral distress.
- D. Disliking colleagues is interpersonal conflict.

Question 274 • Correct Answer: B

Which action demonstrates the nurse's role as a patient advocate?

Patient advocacy is demonstrated by questioning an order that seems inappropriate and voicing concerns through proper channels.

Why the other choices are less appropriate:

- A. Following all orders unquestioningly is not advocacy.
- C. Family permission for all interventions is not required and not advocacy.
- D. Documenting without acting fails the advocacy role.

Question 275 • Correct Answer: B

End-of-life care: withdrawing life-sustaining treatment is:

Withdrawing life-sustaining treatment is ethically and legally acceptable when it reflects the patient's informed wishes or best interests; withholding and withdrawing are ethically equivalent.

Why the other choices are less appropriate:

- A. It is not never acceptable.
- C. A court order is not routinely required.
- D. Unanimous family agreement is not a legal prerequisite.

Question 276 · Correct Answer: D

POLST (Physician Orders for Life-Sustaining Treatment) differs from advance directives because:

POLST is a set of actual medical orders that are immediately actionable and transferable across care settings, unlike advance directives which state wishes.

Why the other choices are less appropriate:

- A. Being 'legal only' does not capture its actionable-order nature.
- B. POLST does not require an attorney.
- C. POLST applies across settings, not only hospitals.

Question 277 · Correct Answer: A

A patient asks the nurse not to disclose their diagnosis to their family. The nurse should:

The nurse must respect the patient's confidentiality and not disclose the diagnosis to family without the patient's consent, consistent with HIPAA.

Why the other choices are less appropriate:

- B. Family does not have an automatic right to the information.
- C. Informing the charge nurse does not resolve the confidentiality request.
- D. There is no requirement to tell the family.

Question 278 · Correct Answer: B

Critical care nurses experience 'compassion fatigue' due to:

Compassion fatigue arises from repeated exposure to suffering and trauma in the absence of adequate support.

Why the other choices are less appropriate:

- A. It is not caused by lack of clinical knowledge.
- C. Administrative burden contributes to burnout, not specifically compassion fatigue.
- D. CE requirements are not the cause.

Question 279 · Correct Answer: C

A family demands CPR for a patient the physician has declared medically futile. The BEST nursing action is:

When family demands medically futile CPR, the best action is to arrange a family meeting with the interdisciplinary team, chaplain, and ethics committee to align goals of care.

Why the other choices are less appropriate:

- A. Performing CPR without an order is inappropriate.
- B. Bluntly refusing without a process abandons the family.
- D. Ignoring the request fails communication and support.

Question 280 · Correct Answer: D

Cultural competence in critical care requires the nurse to:

Cultural competence requires approaching each patient's cultural and spiritual beliefs with humility, curiosity, and respect, asking rather than assuming.

Why the other choices are less appropriate:

- A. Learning only common practices leads to stereotyping.
- B. Avoiding cultural discussion neglects individualized care.
- C. Identical care ignores cultural needs.

Question 281 · Correct Answer: A

A nurse overhears a colleague making derogatory comments about a patient. The nurse's FIRST action:

The nurse should intervene directly if safe and report through facility peer-accountability processes when overhearing derogatory comments about a patient.

Why the other choices are less appropriate:

- B. Ignoring it condones unprofessional behavior.
- C. Waiting until shift end delays accountability.
- D. Apologizing on the colleague's behalf does not address the misconduct.

Question 282 · Correct Answer: B

Organ donation conversation with a family of a brain-dead patient is BEST handled by:

Organ donation conversations are best led by a trained organ procurement organization (OPO) coordinator, ideally with nursing support, to ensure decoupling and expertise.

Why the other choices are less appropriate:

- A. The bedside nurse alone is not the appropriate requestor.
- C. The physician alone is not the trained requestor.
- D. Social work alone does not lead donation requests.

Question 283 · Correct Answer: C

A nurse documents 'patient fell from bed' but witnessed the patient being dropped by a staff member. This is:

Charting 'patient fell' when a witnessed drop occurred is inaccurate documentation and a form of falsification; the nurse must document what actually happened.

Why the other choices are less appropriate:

- A. It is not acceptable shorthand.
- B. Protecting a colleague does not justify false records.
- D. Absence of harm does not excuse falsification.

Question 284 · Correct Answer: D

Restorative care practices in ICU include:

Restorative ICU care includes spontaneous awakening trials, early mobility, sleep promotion, cognitive stimulation, and family engagement (ABCDEF bundle elements).

Why the other choices are less appropriate:

- A. Continuous sedation and restraints worsen delirium and deconditioning.
- B. Limiting visitors reduces beneficial family support.
- C. High-dose opioids alone are not restorative.

Question 285 · Correct Answer: A

Which factor MOST negatively impacts quality of death and dying in the ICU?

Poor communication, uncontrolled pain, and lack of patient-centered goals-of-care discussion most negatively impact quality of death and dying in the ICU.

Why the other choices are less appropriate:

- B. Family involvement improves the experience.
- C. Adequate staffing improves care.
- D. Palliative care involvement improves quality of dying.

Question 286 · Correct Answer: B

The nurse's role in evidence-based practice (EBP) includes:

The nurse's EBP role includes questioning current practices, seeking research evidence, and advocating for change based on best evidence.

Why the other choices are less appropriate:

- A. Implementing only physician orders is not EBP engagement.
- C. Following protocols without review omits critical appraisal.
- D. EBP is broader than formal research participation.

Question 287 · Correct Answer: C

Which statement about ICU family visitation is supported by current evidence?

Current evidence supports unrestricted/flexible family visitation, which reduces patient anxiety and delirium and improves family satisfaction.

Why the other choices are less appropriate:

- A. Restricted hours do not improve outcomes.
- B. Limiting visits to post-rounds is not evidence-based.
- D. Evidence does support visitation benefits.

Question 288 · Correct Answer: D

A nurse assesses that a patient appears to be experiencing uncontrolled pain despite receiving ordered analgesics. BEST action:

For uncontrolled pain despite ordered analgesics, reassess with a validated tool, notify the physician, and request an order adjustment per protocol.

Why the other choices are less appropriate:

- A. Waiting for the next dose leaves pain untreated.
- B. Documenting only fails to intervene.
- C. Administering an extra dose without an order is outside scope.

Question 289 · Correct Answer: A

'Predictability' as a patient characteristic in the Synergy Model means:

Predictability is the summative expectedness of the illness course, describing how predictable the clinical trajectory is.

Why the other choices are less appropriate:

- B. Likelihood to survive is not the definition.
- C. Adherence to treatment is unrelated.
- D. Vital-sign stability is the separate stability characteristic.

Question 290 · Correct Answer: B

A nurse is caring for a patient who speaks only Spanish. BEST practice is:

Best practice is to use a trained medical interpreter (in-person, phone, or video), which ensures accuracy and confidentiality for limited-English-proficiency patients.

Why the other choices are less appropriate:

- A. Family/untrained translators increase error risk and breach privacy.
- C. Speaking louder and using gestures does not ensure comprehension.
- D. English materials do not help a Spanish-speaking patient.

Question 291 · Correct Answer: C

The SBAR communication tool stands for:

SBAR stands for Situation, Background, Assessment, Recommendation, a standardized handoff communication tool.

Why the other choices are less appropriate:

- A. Situation, Behavior, Action, Results is incorrect.
- B. Screening, Background, Assessment, Reporting is incorrect.
- D. Safety, Background, Alert, Response is incorrect.

Question 292 · Correct Answer: D

Closed-loop communication in critical care means:

Closed-loop communication means the sender gives a message, the receiver repeats it back, and the sender confirms, which reduces errors in high-stakes settings.

Why the other choices are less appropriate:

- A. Written-only orders are not closed-loop verbal confirmation.
- B. Electronic-only communication is not the definition.
- C. Avoiding verbal handoffs is not closed-loop communication.

Question 293 · Correct Answer: A

A patient has capacity to make decisions if they demonstrate:

Decision-making capacity requires understanding the situation, appreciating consequences, reasoning about options, and communicating a choice.

Why the other choices are less appropriate:

- B. Agreement with the team is not required for capacity.
- C. Being oriented x4 is not sufficient by itself.
- D. A psychiatric history does not preclude capacity.

Question 294 · Correct Answer: B

Which action BEST represents the nurse applying 'Clinical Inquiry' competency?

Clinical inquiry is best shown by reviewing current evidence on oral care for ventilated patients and proposing a protocol update based on new research.

Why the other choices are less appropriate:

- A. Following the bundle without question is not inquiry.
- C. Completing tasks is routine practice.
- D. Administering medications as ordered is task completion.

Question 295 · Correct Answer: C

An ICU nurse is asked to care for 6 patients simultaneously during a critical staffing shortage. The nurse's PRIORITY action:

The priority is to escalate the unsafe-staffing concern to the charge nurse/supervisor, document it, and follow facility policy, as patient and nurse safety are paramount.

Why the other choices are less appropriate:

- A. Silent acceptance ignores a safety risk.
- B. Refusing to care for any patient may constitute abandonment.
- D. Accepting without escalating leaves the unsafe condition unaddressed.

Question 296 · Correct Answer: D

A patient who has been in the ICU for 3 weeks with ARDS is showing signs of depression and hopelessness. The nurse's BEST intervention:

The best intervention is to engage the patient therapeutically, facilitate chaplain/counseling referral, promote autonomy and participation in care, and involve family.

Why the other choices are less appropriate:

- A. Referring and doing nothing further neglects ongoing nursing support.
- B. Documenting and waiting delays needed support.
- C. Increasing sedation masks distress and worsens outcomes.

Question 297 · Correct Answer: A

Which describes the 'complexity' patient characteristic in the Synergy Model?

Complexity is the intricate entanglement of two or more systems (physiological, family, community) requiring intensive nursing care.

Why the other choices are less appropriate:

- B. Number of diagnoses alone is not complexity.
- C. Illness severity alone is stability, not complexity.
- D. Medication count is not the definition.

Question 298 · Correct Answer: B

Nurse fatigue in the ICU is associated with increased risk of:

Nurse fatigue in the ICU increases medication errors, needlestick injuries, and reduced critical thinking.

Why the other choices are less appropriate:

- A. Fatigue worsens, not improves, outcomes.
- C. Fatigue impairs communication.
- D. Fatigue lowers job satisfaction.

Question 299 · Correct Answer: C

A patient's healthcare power of attorney (HCPOA) states 'no heroic measures.' The patient is now intubated per family request against the written...

When care conflicts with the written HCPOA directive, the nurse must escalate per facility policy, notifying charge nurse, physician, and risk management, and request an ethics consultation.

Why the other choices are less appropriate:

- A. Accepting the situation ignores the directive conflict.
- B. Continuing without escalation fails advocacy.
- D. Documenting only does not resolve the conflict.

Question 300 · Correct Answer: B

The concept of 'resource availability' in the Synergy Model refers to:

Resource availability is the extent of resources the patient/family brings, including social support, finances, knowledge, health literacy, and community resources.

Why the other choices are less appropriate:

- A. Hospital budget is an institutional resource, not the patient's.
- C. Nursing staff is a system resource.
- D. Available technology is not the patient-brought resource.

Question 301 · Correct Answer: A

Which action demonstrates authentic leadership in the ICU?

Authentic leadership involves self-awareness, transparent communication, building trust, empowering staff, and advocating for healthy work environments.

Why the other choices are less appropriate:

- B. Unilateral decisions without input are not authentic leadership.
- C. Following only directives lacks authenticity.
- D. Rigid hierarchy without feedback opposes authentic leadership.

Question 302 · Correct Answer: B

A critically ill patient's daughter states: 'My father always said he never wanted to be on machines.' This is an example of:

A daughter reporting the father's stated wish not to be on machines is a verbal advance directive, an oral expression of wishes that should be documented and honored.

Why the other choices are less appropriate:

- A. It is not a formal written legal advance directive.
- C. It is relevant and should not be ignored.
- D. Notarization is not required for it to inform care.

Question 303 · Correct Answer: C

Truth-telling (veracity) in nursing ethics requires:

Veracity requires providing honest, accurate information to patients and families, even when the truth is difficult.

Why the other choices are less appropriate:

- A. Telling only what will not upset is deceptive.
- B. Deferring all information to the physician evades the duty.
- D. Avoiding prognosis discussions violates veracity.

Question 304 · Correct Answer: D

Which intervention BEST supports family members of a dying ICU patient?

Best family support for a dying ICU patient includes welcoming presence, providing regular updates, offering chaplain support, and preparing them for the dying process.

Why the other choices are less appropriate:

- A. Limiting bedside time removes support.
- B. Written information alone is insufficient.
- C. Restricting visits to post-rounds is not supportive.

Question 305 · Correct Answer: A

A nurse disagrees with a physician's order for a patient but it is not an emergency. The BEST action is:

For a non-emergent disagreement, use the chain of command: discuss the concern with the physician, document, and escalate to the charge nurse or supervisor if unresolved.

Why the other choices are less appropriate:

- B. Following without comment abandons advocacy.
- C. Refusing all questioned orders is not the graded response.
- D. Documenting only does not resolve the concern.

Question 306 · Correct Answer: B

Which factor MOST contributes to medical errors in the ICU?

Communication failures, high workload, fatigue, complex patients, and inadequate handoffs most contribute to ICU medical errors.

Why the other choices are less appropriate:

- A. Experienced staff reduce errors.
- C. Modern technology generally reduces errors.
- D. Evidence-based protocols reduce errors.

Question 307 · Correct Answer: C

'Meaningful recognition' as part of Healthy Work Environment standards means:

Meaningful recognition is acknowledging the contributions of nurses and colleagues in a timely, authentic way that reinforces their value.

Why the other choices are less appropriate:

- A. Annual reviews alone are not timely recognition.
- B. Mandatory ceremonies are not authentic recognition.
- D. Financial bonuses alone do not capture meaningful recognition.

Question 308 · Correct Answer: D

An ICU nurse notices a breakdown in teamwork during a code. Afterward, the BEST action is:

After a teamwork breakdown during a code, the best action is a structured debriefing to identify breakdowns, reinforce what worked, and improve future performance.

Why the other choices are less appropriate:

- A. Ignoring it forgoes learning.
- B. An incident report without discussion misses team learning.
- C. Complaining to the charge nurse alone is not constructive.

Question 309 · Correct Answer: A

The ethical principle MOST challenged by resource scarcity during a crisis standard of care is:

Justice, the fair allocation of scarce resources among patients with competing needs, is the principle most challenged during crisis standards of care.

Why the other choices are less appropriate:

- B. Beneficence concerns individual benefit, less the allocation dilemma.
- C. Non-maleficence is do-no-harm.
- D. Autonomy concerns individual self-determination.

Question 310 · Correct Answer: B

A nurse caring for a patient who is being kept alive against stated wishes experiences intense moral distress. The BEST organizational response is:

The best organizational response to moral distress is ethics consultation, peer support, palliative care involvement, and a structured goals-of-care conversation.

Why the other choices are less appropriate:

- A. Telling the nurse to follow orders dismisses the distress.
- C. Transferring the patient avoids the underlying issue.
- D. Documenting and doing nothing fails to support the nurse.

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