CANRA Part 2

BOTANICAL MEDICINE

300 Practice MCQs with Explained Answers

12 lessons | 25 questions each | study mode and exam mode available in the website

Independently authored revision questions based on uploaded teaching materials and the March 2026 clinical-sciences reference guide. These are not official examination questions or a prediction of exam content.

How to use this workbook

• First complete one lesson, then answer its 25 questions before looking at the explanation key.

• For unsafe or high-risk cases, identify red flags, medication interactions and required medical care before considering adjunctive herbal use.

• Review missed questions by reading the related lesson, botanical name index, and relevant source materials.

• Older teaching materials may describe traditional indications or historical regimens. They are not current individualized prescribing instructions.

Answer key and explanations appear after all 300 questions.

Lesson 1: Botanical Pharmacognosy, Identification and Herbal Actions

25 practice questions. Circle or record the single best answer.

Q01-01. What detail best distinguishes two products both labelled “ginseng”?

A. Bottle colour
B. Retail shelf
C. Trademark font
D. Verified Latin species and plant part

Q01-02. A herbal action described as “demulcent” primarily refers to what?

A. Directly killing bacteria in blood
B. Inducing general anaesthesia
C. Soothing mucilage-containing preparations
D. Blocking all inflammation

Q01-03. Which plant is classically listed as a carminative in the uploaded notes?

A. Digitalis purpurea
B. Mentha piperita
C. Aconitum napellus
D. Conium maculatum

Q01-04. What does a traditional “alterative” classification establish?

A. A historical herbal-action category, not proven efficacy
B. A randomized trial showing cure
C. Guaranteed liver detoxification
D. A regulatory indication for cancer treatment

Q01-05. A plant extract shows antibacterial activity in a test tube. Which conclusion is valid?

A. It cures sepsis
B. It is safe in pregnancy
C. It replaces antibiotics
D. Activity in that model; clinical efficacy remains uncertain

Q01-06. Which factor is needed when comparing herbal preparations?

A. Only total bottle size
B. Only retail price
C. Extract ratio and standardization
D. Only marketing claim

Q01-07. Which named substance group includes many plant astringents?

A. Pure oxygen
B. Tannins
C. Sodium chloride
D. Vitamin D alone

Q01-08. Which claim is most evidence-appropriate for a historical remedy with no adequate trials?

A. “Traditionally used; effectiveness uncertain”
B. “Guaranteed cure”
C. “No side effects”
D. “Equivalent to any prescription medicine”

Q01-09. What should accompany Latin plant identity in an ingredient record?

A. Astrological sign
B. Retail discount
C. Seller slogan
D. Plant part and preparation

Q01-10. A patient has new severe fatigue. What comes first?

A. Immediate multi-herb tonic
B. Ignore new symptoms
C. Clinical assessment for underlying causes
D. Replace all prescriptions

Q01-11. A capsule says “black cohosh” without a species. Which information most improves identification?

A. The barcode font
B. Actaea racemosa and plant part
C. The capsule colour
D. An influencer recommendation

Q01-12. Which Latin name corresponds to common marshmallow in the botanical list?

A. Arnica montana
B. Artemisia annua
C. Althaea officinalis
D. Aconitum napellus

Q01-13. Which botanical is commonly called yarrow?

A. Aesculus hippocastanum
B. Asclepias tuberosa
C. Allium sativum
D. Achillea millefolium

Q01-14. A patient asks whether “antineoplastic” in an herb table proves cancer treatment benefit. What is correct?

A. Traditional action labels do not establish clinical benefit
B. It proves survival benefit
C. It authorizes stopping chemotherapy
D. It guarantees human safety

Q01-15. Which pair gives the same common medicinal plant in accepted Latin naming variants?

A. Ginkgo biloba and Glycyrrhiza glabra
B. Actaea racemosa and Cimicifuga racemosa
C. Digitalis purpurea and Calendula officinalis
D. Althaea officinalis and Aconitum napellus

Q01-16. Which plant in the guide is most associated with the traditional “bitter” action?

A. Calendula officinalis
B. Glycyrrhiza glabra
C. Gentiana lutea
D. Althaea officinalis

Q01-17. The term “styptic” is most accurately linked to which traditional action?

A. Eliminating fungal spores
B. Stimulating bowel emptying
C. Inducing anesthesia
D. Helping limit minor local bleeding

Q01-18. What is the chief botanical distinction between dandelion leaf and dandelion root?

A. Different plant parts can have different traditional uses
B. The species always changes
C. Both are chemically identical
D. Only the leaf is edible

Q01-19. Which drug–herb research claim is most defensible from a positive animal study alone?

A. It proves superiority to standard treatment
B. It supports a hypothesis, not proven clinical benefit
C. It establishes human dose
D. It excludes adverse effects

Q01-20. A herb contains mostly volatile aromatic oils. Which description best fits those constituents?

A. Always safe for ingestion
B. Unaffected by heat and air
C. Small volatile molecules whose handling may affect retention
D. All are identical to proteins

Q01-21. Which class is often associated with astringency in traditional herbal medicine?

A. Cellulose packaging
B. Pure water
C. Calcium carbonate alone
D. Tannins

Q01-22. What should a student check when a Latin name in an older handout differs from a newer reference?

A. Accepted synonyms and authoritative taxonomic naming
B. Assume two unrelated species
C. Use only common names
D. Ignore the label

Q01-23. Which record best allows safe comparison of two chamomile products?

A. Advertising slogans
B. Species, plant part, formulation and concentration
C. Only flavour
D. Bottle size and colour

Q01-24. A patient has a documented allergy to the Asteraceae family. Which action is most reasonable before recommending chamomile?

A. Give a double dose
B. Switch directly to an essential oil
C. Review plant-family cross-reactivity and avoid if relevant
D. Assume chamomile cannot trigger allergy

Q01-25. The botanical name Ginkgo biloba denotes which common plant?

A. Goldenseal
B. Gotu kola
C. Ginseng
D. Ginkgo

Lesson 2: Growing, Wildcrafting, Harvesting, Drying and Quality Control

25 practice questions. Circle or record the single best answer.

Q02-01. In the source notes, “garbling” means what?

A. Sterilizing herbs by radiation
B. Turning powder into oil
C. Separating desired leaves or flowers from stems
D. Fermenting all roots

Q02-02. Why is a fast, controlled drying process important?

A. It guarantees sterility
B. It limits mould without excessive constituent degradation
C. It removes all pesticides
D. It standardizes every batch

Q02-03. Which is a likely quality concern for wildcrafted herbs?

A. Mistaken species identification
B. Uniform extract concentration guaranteed
C. Freedom from contaminants guaranteed
D. No seasonal variability

Q02-04. Which harvest rule is safest?

A. Harvest every root during flowering
B. Harvest all aerial parts in winter
C. Ignore species and plant part
D. Use species-specific validated collection timing

Q02-05. What documentation best supports batch traceability?

A. Patient eye colour
B. Website theme
C. Supplier, lot number and harvest/production details
D. Discount percentage

Q02-06. What is a problem with moist herb material in storage?

A. Guaranteed potency increase
B. Fungal or mycotoxin risk
C. Removal of bacteria
D. Automatic detoxification

Q02-07. Why avoid long direct sunlight exposure while drying some herbs?

A. Possible degradation of heat/light-sensitive constituents
B. It creates cyanide
C. It converts all roots to bark
D. It guarantees more active ingredients

Q02-08. A batch has no identity certificate. What is the safest action?

A. Dispense because it smells normal
B. Relabel as another plant
C. Heat it and ignore identity
D. Quarantine pending verification

Q02-09. Which contaminant is relevant to herbal raw materials?

A. Only pure distilled water
B. Only table salt
C. Heavy metals
D. Only inert cellulose

Q02-10. A source says dried herbs “last three years.” How should this be handled?

A. As guaranteed expiry for every product
B. As a rough historical statement, not universal stability data
C. As proof no mould can develop
D. As permission to ignore labels

Q02-11. A supplier offers unlabelled bags of dried roots. What is the first quality issue?

A. Package colour
B. Species and plant-part authentication
C. Tea cup size
D. Retail discount

Q02-12. A root sample is visibly mouldy after storage. What should the dispenser do?

A. Mix with fresh material
B. Add perfume to mask odour
C. Reject or quarantine the batch
D. Remove only the visible mould and use it

Q02-13. Which approach best documents a wildcrafted botanical's origin?

A. Only the grower’s name
B. Only a marketing brochure
C. Only price per gram
D. Collection location, date, species and lot identity

Q02-14. A plant is picked near a heavily trafficked industrial road. What risk needs evaluation?

A. Heavy-metal and environmental contamination
B. Guaranteed sterility
C. Higher medicinal potency
D. Automatic removal of pesticide residues

Q02-15. Which quality test directly addresses authenticity of a powdered herb?

A. Checking the invoice only
B. Validated identification testing against authenticated reference material
C. Colour matching to website
D. Tasting a single granule

Q02-16. An herb grows in a threatened wild population. What best reflects ethical sourcing?

A. Ignore habitat impact
B. Use an unverifiable middleman
C. Verified sustainable or cultivated supply
D. Harvest all mature plants

Q02-17. Two batches differ greatly in a marker compound despite the same species. What does this show?

A. Species names are meaningless
B. The higher batch is always safer
C. Both batches must have identical effects
D. Natural materials vary and may need standardization

Q02-18. During drying, a thick pile of leaves remains damp inside. Which modification is most appropriate?

A. Spread thinly with suitable airflow
B. Seal them while damp
C. Expose to uncontrolled high heat
D. Leave in plastic bags

Q02-19. A supplier cannot produce any batch or expiry information. What is the best approach?

A. Use the product only in children
B. Do not dispense until documentation is resolved
C. Assume potency is stable indefinitely
D. Estimate the missing dates

Q02-20. A botanist identifies an herb by its flower, but only bark is provided. What is the risk?

A. Bark cannot carry contaminants
B. The flower validates any batch forever
C. The supplied plant part has not been independently authenticated
D. Every part has the same identity

Q02-21. Which item is most useful during a product recall?

A. Website visitor count
B. Packaging decoration
C. Retail price history
D. Lot number associated with dispensing records

Q02-22. A harvested plant is dried under intense sun until scorched. Which concern arises?

A. Heat and light can alter or degrade constituents
B. It becomes more sterile than medication
C. Plant identity improves
D. All toxic constituents disappear

Q02-23. What is a sensible approach to the “three-year shelf life” claim in an older lecture?

A. Ignore storage conditions
B. Rely on product-specific stability and labelled expiry
C. Apply three years to every extract
D. Assume no moisture issues

Q02-24. A purchased herbal extract has a certificate showing microbial contamination above limits. What should be done?

A. Give it only topically without review
B. Remove the certificate
C. Quarantine and investigate or reject it
D. Dilute it until numbers seem lower

Q02-25. Which record would be most helpful in distinguishing an authentic dried bark from a substituted species?

A. Retail logo
B. Customer reviews
C. Aromatherapy claim
D. Voucher specimen and validated species identification

Lesson 3: Infusions, Decoctions, Powders, Tinctures and Topicals

25 practice questions. Circle or record the single best answer.

Q03-01. Which plant material is usually best suited to an infusion?

A. Thick bark exclusively
B. Tender leaves and flowers
C. Solid metal
D. Unwashed stone

Q03-02. A decoction differs from an infusion mainly by what?

A. Heating harder plant material for extraction
B. Using no water
C. Always containing alcohol
D. Always being sterile

Q03-03. What does 1:5 in a dry herb tincture commonly refer to?

A. Five doses per hour
B. Five herbs per capsule
C. A clinical efficacy score
D. Initial herb mass to liquid volume ratio

Q03-04. Why must ethanol concentration be documented for tinctures?

A. It proves safety for all patients
B. It eliminates interactions
C. It affects extraction and exposure
D. It replaces botanical identity

Q03-05. Why might an essential-oil product require extra caution?

A. It is always weaker than an infusion
B. Concentrated constituents can irritate or be toxic
C. It is always safe to swallow
D. It has no interactions

Q03-06. What makes powder and standardized extract doses non-equivalent?

A. Different constituent concentrations
B. Both must have identical potency
C. Both always contain no active compounds
D. Different packaging colours

Q03-07. A product label lacks whether the herb is fresh or dried. Why does that matter?

A. It changes the plant genus
B. It guarantees purity
C. It determines legal ownership
D. Water content changes ratio interpretation

Q03-08. Which is an appropriate preparation-quality check?

A. Trust a generic “natural” logo
B. Assume all teas are safe
C. Verify identity, batch and expiry
D. Skip product warnings

Q03-09. An oral essential oil is promoted for cough in a child. What is safest?

A. Give an adult dose
B. Avoid self-directed use; assess pediatric risk and approved care
C. Assume all oils are foods
D. Mix with solvent to guarantee safety

Q03-10. Which route is relevant to local skin reactions?

A. Topical salve or cream
B. Intracranial injection
C. Unknown route
D. All routes are equivalent

Q03-11. A student wants to extract constituents from chamomile flowers with hot water. What preparation is traditionally suitable?

A. Strong alkali digestion
B. Infusion
C. Dry distillation of plastic
D. Sterile injection

Q03-12. Which botanical part often suits a decoction rather than a brief infusion?

A. Isolated volatile oil
B. Commercial capsule shell
C. Tough root or bark
D. Fresh petal alone

Q03-13. A 1:5 tincture is prepared using 100 g dried material. What starting solvent volume corresponds to that ratio?

A. 20 mL
B. 5 mL
C. 5,000 mL
D. 500 mL

Q03-14. A patient abstaining from alcohol requests a botanical product. Which detail should be checked?

A. Ethanol content in liquid extracts
B. Only the liquid colour
C. Retail location
D. Manufacturer’s mascot

Q03-15. Why should peppermint essential oil not be substituted millilitre-for-millilitre for peppermint tea?

A. Oils are always safe in infants
B. The concentrated oil differs greatly in strength and safety
C. Both are pharmacologically identical
D. Tea contains no active constituents

Q03-16. What does “standardized to 5% marker compound” primarily describe?

A. Absence of all contaminants
B. A universal adult dose
C. A measured content specification for that marker
D. A proven cure rate

Q03-17. Which route generally increases concern about a highly concentrated essential oil in a toddler?

A. Looking at an intact sealed bottle
B. Smelling an empty cup
C. Reading a label
D. Oral ingestion

Q03-18. Which step reduces the chance of confusing two mixed herbal powders?

A. Label each authenticated ingredient before compounding
B. Rely on identical colours
C. Skip weighing
D. Discard batch logs

Q03-19. A topical salve causes an itchy rash at the application site. The next step is to?

A. Add another fragranced oil
B. Stop the product and assess contact dermatitis
C. Increase use immediately
D. Assume allergy is impossible

Q03-20. Which observation invalidates an assumption that all tinctures are identical?

A. Tinctures have no contraindications
B. One drop equals one capsule
C. Alcohol percentage and extraction ratio vary by preparation
D. All tinctures contain identical constituents

Q03-21. A volatile-rich herbal tea is prepared in a covered cup. What is the main traditional rationale?

A. Generate a sterile injectable drug
B. Convert all oils to salts
C. Remove all allergens
D. Reduce loss of volatile aromatic components

Q03-22. A formula is offered as dry powder and liquid extract. What must change when comparing doses?

A. Consider concentration, extraction and validated reference dose
B. Use the same teaspoon automatically
C. Assume powder is always more potent
D. Convert dose by bottle colour

Q03-23. A tincture label states “1:2 fresh herb” versus “1:5 dried herb.” Why is direct volume equivalence unsafe?

A. Dried herbs require no identification
B. Starting water content and extraction differ
C. They contain identical active concentrations
D. Fresh herbs have no constituents

Q03-24. A parent asks to inject homemade chamomile infusion into an inflamed joint. What response is correct?

A. Dilute with tap water and inject
B. Use a larger needle
C. Do not inject nonsterile herbal preparations
D. Boiling once makes it injectable

Q03-25. What is the main difference between a cold maceration and a decoction?

A. Only the Latin species
B. Only the container colour
C. Maceration is always sterile
D. Temperature and extraction conditions

Lesson 4: Clinical Formulation, Posology and Documentation

25 practice questions. Circle or record the single best answer.

Q04-01. What is the first step in the uploaded formulation guide?

A. Confirm the working clinical assessment
B. Buy the most expensive herb
C. Select the strongest dose
D. Ignore current medications

Q04-02. Which item is essential in a complete botanical order?

A. Only common name
B. Only a retail link
C. Only flavour
D. Latin name, part, strength, route, dose, duration

Q04-03. A hypothetical 60 mL blend has 30 mL of one ingredient. Its proportion is what?

A. 25 percent
B. 10 percent
C. 50 percent
D. 75 percent

Q04-04. Which is a problem with copying an old “none noted” contraindication column?

A. It ensures safety
B. It may omit updated pregnancy and drug risks
C. It eliminates patient factors
D. It overrides new evidence

Q04-05. What should determine botanical duration?

A. Defined goals, evidence and reassessment
B. Automatic lifelong continuation
C. Advertising claims
D. Bottle size alone

Q04-06. Why favour fewer ingredients when evidence permits?

A. It guarantees cure
B. It removes need for dose review
C. It eliminates allergy
D. Easier attribution of benefit, harm and interactions

Q04-07. Which variable matters when calculating a formula percentage?

A. Patient height alone
B. Retail price
C. Ingredient amount divided by total mixture
D. Colour intensity

Q04-08. What is meant by posology?

A. Plant photography
B. Study of doses and dose regimens
C. Habitat mapping
D. Trademark registration

Q04-09. Which factor is important before recommending a tincture?

A. Alcohol content and patient-specific contraindications
B. Only sweetness
C. Only cap colour
D. Only manufacturer logo

Q04-10. When should the clinician decide on follow-up?

A. Only after an emergency
B. Never
C. After years without contact
D. Before or at initiation of any monitored trial

Q04-11. A case vignette describes recurrent abdominal pain plus weight loss and rectal bleeding. What should precede selecting digestive herbs?

A. Use a formula without history
B. Investigate alarm features and arrange appropriate medical assessment
C. Begin a complex tonic indefinitely
D. Assume irritable bowel syndrome

Q04-12. When preparing a multiherb formula, what is the purpose of recording each ingredient's concentration?

A. Avoid listing the Latin name
B. Replace informed consent
C. Allow reproducible dose and safety review
D. Improve graphic design

Q04-13. A formula contains 25% one tincture and the patient takes 8 mL of blend per day. How much of that tincture is supplied daily?

A. 4 mL
B. 8 mL
C. 25 mL
D. 2 mL

Q04-14. Three ingredients are mixed at 20%, 30% and 50%. What is the total?

A. 100%
B. 80%
C. 130%
D. 60%

Q04-15. A prescription says "5 mL tid." What is the daily volume?

A. 20 mL
B. 15 mL
C. 5 mL
D. 10 mL

Q04-16. A patient is instructed to use 10 mL twice daily for 14 days. What total liquid volume is required?

A. 70 mL
B. 200 mL
C. 280 mL
D. 140 mL

Q04-17. Which factor makes a suggested dose from a 2017 student case potentially unsuitable today?

A. Every older number remains mandatory
B. The bottle might be clear
C. No review is ever needed
D. Patient condition, interactions and current product concentration may differ

Q04-18. An order is written with a common herb name only. What should be added for a safer botanical prescription?

A. Latin binomial, plant part, formulation, concentration, dose and route
B. Only a store SKU
C. Patient zodiac sign
D. More marketing copy

Q04-19. A patient takes 5 mL three times daily for 30 days. Which bottle size is sufficient on volume alone?

A. 30 mL
B. 500 mL
C. 100 mL
D. 250 mL

Q04-20. A student selects herbs based on an assumed “liver detox” diagnosis without assessment. What is the problem?

A. Insufficient colour variety
B. Use of a measuring cup
C. Unvalidated mechanism and missing differential diagnosis
D. Too many plant Latin names

Q04-21. Which abbreviation conventionally means “as needed”?

A. TID
B. BID
C. QID
D. PRN

Q04-22. A formula is started despite concurrent warfarin use. What should be documented first?

A. A specific interaction review and anticoagulation care plan
B. Only expected taste
C. Only herbal tradition
D. No monitoring because the product is natural

Q04-23. Which measure is most useful for tracking a botanical intervention aimed at sleep quality?

A. Price alone
B. Baseline and follow-up sleep measures and adverse effects
C. Number of plants pictured
D. Website page views

Q04-24. A patient reports nausea after starting a complex six-herb product. Which approach best helps causality assessment?

A. Add a seventh herb immediately
B. Ignore all symptoms
C. Record start dates, dose, timing, other drugs and dechallenge response
D. Assume only the last-named herb is responsible

Q04-25. Why is a “reference dose range” not a stand-alone reason to prescribe?

A. It guarantees efficacy
B. It makes contraindications irrelevant
C. It rules out poisoning
D. Patient-specific risks, product strength and evidence must be considered

Lesson 5: Adaptogens, Nervines, Sleep and Mood Botanicals

25 practice questions. Circle or record the single best answer.

Q05-01. Which herb is identified as ashwagandha in the source notes?

A. Valeriana officinalis
B. Cynoglossum officinale
C. Digitalis purpurea
D. Withania somnifera

Q05-02. How should yin–yang rankings of adaptogens be interpreted?

A. Guaranteed head-to-head efficacy
B. Laboratory potency measurements
C. Traditional energetic teaching, not comparative trial evidence
D. Official regulatory rankings

Q05-03. What current safety concern is associated with ashwagandha?

A. Guaranteed safety in pregnancy
B. Rare liver injury and thyroid/medication interactions
C. No effects on sedation
D. No reported side effects

Q05-04. Which class best describes Valeriana in historical herbal notes?

A. Sedative or nervine
B. Cardiac glycoside antidote
C. Cyanide chelator
D. Essential vitamin

Q05-05. A patient takes a benzodiazepine and wishes to add sedating herbs. What should happen?

A. Assume enhanced safety
B. Double all doses
C. Stop prescribed medicine abruptly
D. Screen for additive sedation and impaired function

Q05-06. Which herb has important serotonergic and pharmacokinetic interaction risks?

A. Calendula officinalis topical
B. Ulmus rubra bark tea
C. Hypericum perforatum
D. Avena sativa as food

Q05-07. St. John’s wort with an SSRI can cause what dangerous outcome?

A. Reliable prevention of mania
B. Serotonin toxicity
C. Guaranteed thyroid normalization
D. Complete drug detox

Q05-08. When depression includes suicidal thoughts, what is the priority?

A. Urgent mental-health safety assessment
B. Self-select a herbal blend
C. Avoid clinical review
D. Treat exclusively with tea

Q05-09. Evidence for a specific ashwagandha product for sleep is best described as what?

A. Proven for every chronic disease
B. Evidence of zero toxicity
C. Equivalent to all hypnotics
D. Limited and formulation-specific

Q05-10. A traditional “adaptogen” claim means what?

A. Guaranteed endocrine cure
B. Defined pharmaceutical receptor
C. Historical stress-response category
D. A standardized laboratory diagnosis

Q05-11. A patient taking sertraline asks to start St. John's wort for low mood. What is the main concern?

A. Safe unsupervised combination
B. Serotonergic toxicity and pharmacokinetic interactions
C. Guaranteed better mood
D. Elimination of all side effects

Q05-12. Which botanical is commonly called ashwagandha?

A. Glycyrrhiza glabra
B. Sambucus nigra
C. Withania somnifera
D. Rhodiola rosea

Q05-13. Which herb is associated with potential liver injury and sedative effects?

A. Mentha piperita tea
B. Zea mays silk
C. Taraxacum officinale leaf
D. Piper methysticum (kava)

Q05-14. Which botanical is traditionally classified as a nervine in the supplied notes?

A. Avena sativa
B. Digitalis purpurea
C. Aconitum napellus
D. Conium maculatum

Q05-15. A patient with autoimmune thyroid disease asks about ashwagandha. What is most appropriate?

A. Stop thyroid monitoring
B. Review thyroid status, medications and adverse-effect reports before use
C. Assume no endocrine effects
D. Double thyroid replacement

Q05-16. A patient using benzodiazepines wants valerian for insomnia. What is the main concern?

A. Direct antimicrobial resistance
B. Guaranteed withdrawal prevention
C. Potential additive sedation and impairment
D. Loss of all medication activity

Q05-17. Which botanical is traditionally associated with uplifting stress-response “adaptogen” claims?

A. Atropa belladonna
B. Digitalis purpurea
C. Colchicum autumnale
D. Rhodiola rosea

Q05-18. How should the term “adaptogen” be described in exam notes?

A. A traditional or research category, not proof of clinical benefit
B. A licensed diagnosis
C. A guarantee of adrenal repair
D. A validated class of equivalent medicines

Q05-19. A young adult with insomnia also reports suicidal thoughts. Which action is first?

A. Tell the patient to avoid clinicians
B. Urgent risk assessment and appropriate mental health care
C. Offer a sleep tea as sole therapy
D. Delay evaluation for several weeks

Q05-20. Which botanical is commonly known as passionflower?

A. Panax quinquefolius
B. Polygonum multiflorum
C. Passiflora incarnata
D. Piper methysticum

Q05-21. A patient has worsening jaundice after starting a multi-ingredient “stress” supplement. What is most appropriate?

A. Continue to establish a pattern
B. Add a hepatoprotective herb as replacement
C. Wait for the bottle to be empty
D. Stop suspected product and seek urgent evaluation for liver injury

Q05-22. Which botanical is North American ginseng, not Korean/Asian ginseng?

A. Panax quinquefolius
B. Panax ginseng
C. Eleutherococcus senticosus
D. Rhodiola rosea

Q05-23. A patient believes all products labelled “ginseng” are interchangeable. What is the best response?

A. Choose whichever smells strongest
B. Confirm exact species and evidence because the term covers different plants
C. Assume same active compounds and dose
D. Replace medications with any ginseng

Q05-24. Which herb has traditional calming or nervine uses rather than being an established antidepressant replacement?

A. Digitalis purpurea
B. Conium maculatum
C. Scutellaria lateriflora
D. Aconitum napellus

Q05-25. Which intake question is especially important for an herbal sleep formula?

A. Preferred mug shape
B. Favourite leaf colour
C. Neighbourhood garden size
D. Other sedatives, alcohol use, driving and fall risk

Lesson 6: Digestive, Respiratory and Hepatobiliary Botanicals

25 practice questions. Circle or record the single best answer.

Q06-01. Which pair is traditionally classified as demulcents in the supplied notes?

A. Digitalis and Aconitum
B. Conium and Datura
C. Althaea officinalis and Ulmus rubra
D. Senna and cascara only

Q06-02. Peppermint oil may aggravate which symptom?

A. Acute major bleeding
B. Gastroesophageal reflux
C. Bone fracture
D. Severe hypoglycemia alone

Q06-03. Which herb presents hypertension/hypokalemia concerns?

A. Glycyrrhiza glabra
B. Matricaria recutita
C. Calendula officinalis
D. Avena sativa

Q06-04. An older note calls an herb “hepatic.” What follows?

A. Clinical efficacy established
B. No need to investigate jaundice
C. No drug interactions possible
D. Traditional category only, not a hepatitis cure

Q06-05. Which feature in chronic abdominal symptoms is a red flag?

A. Mild gas after beans
B. Occasional hunger
C. Unexplained gastrointestinal bleeding
D. Preference for tea

Q06-06. A patient with worsening dyspnea wants licorice tea only. What is safest?

A. Reassure without examination
B. Assess respiratory emergency and standard care
C. Use herbs as replacement for oxygen
D. Delay evaluation

Q06-07. Which plant is a traditional carminative?

A. Foeniculum vulgare
B. Aconitum napellus
C. Digitalis purpurea
D. Convallaria majalis

Q06-08. Which factor changes peppermint product risk?

A. Only the label font
B. Store music
C. Shipping cost
D. Route and concentrated versus food-level exposure

Q06-09. What does “cholagogue” traditionally mean?

A. Cures biliary obstruction
B. Stops all vomiting
C. Promotes bile flow/release
D. Stimulates bone formation

Q06-10. Which plan is appropriate for an adjunct GI product?

A. No evaluation and indefinite use
B. Defined indication, interaction review and follow-up
C. Ignore medications
D. Assume natural means effective

Q06-11. Which herb is traditionally described as a carminative for bloating?

A. Atropa belladonna
B. Foeniculum vulgare
C. Digitalis purpurea
D. Aconitum napellus

Q06-12. Which medicinal plant is ginger?

A. Glycyrrhiza glabra
B. Gentiana lutea
C. Zingiber officinale
D. Ginkgo biloba

Q06-13. A patient with new difficulty swallowing and unintentional weight loss requests bitters. What is first?

A. Provide only a digestive tonic
B. Assume reflux without assessment
C. Delay clinical referral
D. Evaluate alarm symptoms rather than treating presumptive dyspepsia

Q06-14. Which botanical is peppermint?

A. Mentha piperita
B. Melissa officinalis
C. Matricaria recutita
D. Marshmallow root

Q06-15. Which plant is traditionally used as a demulcent for irritated mucosa?

A. Datura stramonium
B. Althaea officinalis
C. Ephedra sinica
D. Digitalis purpurea

Q06-16. A chronic hepatitis B patient has jaundice and weight loss. Which is the appropriate next step?

A. Assume liver tests do not matter
B. Use an unsupervised high-dose extract
C. Hepatic assessment and guideline-directed infection management
D. Replace antiviral care with an herbal blend

Q06-17. Which botanical commonly contains glycyrrhizin?

A. Taraxacum officinale
B. Althaea officinalis
C. Arctium lappa
D. Glycyrrhiza glabra

Q06-18. A patient with persistent cough develops blood-streaked sputum and breathlessness. What is the safest response?

A. Prompt evaluation for pulmonary red flags
B. Give an expectorant without review
C. Offer only a demulcent
D. Ignore the bleeding if coughing is dry

Q06-19. Which botanical part is most directly described as dandelion root in a formula?

A. Zea mays stigma
B. Taraxacum officinale radix
C. Taraxacum officinale folia
D. Urtica dioica folia

Q06-20. An individual with gallstone-type colic wants a “cholagogue” herb. What is the principal concern?

A. No investigation is indicated
B. Severe pain excludes obstruction
C. Possible biliary obstruction requires assessment before stimulating bile flow
D. All cholagogues dissolve stones

Q06-21. Which botanical is commonly called milk thistle?

A. Sambucus nigra
B. Salix alba
C. Syzygium aromaticum
D. Silybum marianum

Q06-22. A traveller has fever, dehydration and bloody diarrhea. What should take priority over herbal antimicrobials?

A. Urgent assessment, rehydration and indicated diagnostic/treatment pathway
B. Use only a bitter tea
C. Avoid stool or clinical evaluation
D. Take high-dose essential oils

Q06-23. Which botanical action is intended to reduce mucus viscosity and facilitate clearance?

A. Emmenagogue
B. Expectorant
C. Astringent only
D. Styptic

Q06-24. A product is marketed as curing hepatitis through “detoxification.” What is the evidence concern?

A. A liver label guarantees safety
B. Liver disease never involves interactions
C. A marketing claim is not proof of antiviral efficacy
D. All herbal claims are automatically approved

Q06-25. A patient with chronic GERD finds peppermint preparations worsen reflux. What mechanism makes this plausible?

A. Permanent healing of esophagus
B. Prevention of all reflux
C. Increased gastric acidity from every tea
D. Relaxation of lower esophageal sphincter tone

Lesson 7: Cardiovascular, Metabolic and Immune Botanicals

25 practice questions. Circle or record the single best answer.

Q07-01. Why is Digitalis not appropriate for casual herbal self-medication?

A. It contains no active drugs
B. Cardiac glycoside toxicity
C. It is equivalent to chamomile
D. It is a culinary herb

Q07-02. Convallaria majalis is associated with which safety issue?

A. Cardiotoxic glycosides
B. No physiological activity
C. Only benign mucilage
D. Vitamin C deficiency

Q07-03. How should historical “cardiotonic” descriptions be interpreted?

A. Evidence of guaranteed reversal
B. Universal approval for arrhythmias
C. Proof of no adverse reactions
D. Traditional classification; not a substitute for heart-failure therapy

Q07-04. A patient using insulin adds a botanical marketed for glucose lowering. What should be reviewed?

A. Only bottle shape
B. Astrological sign
C. Hypoglycemia risk and glucose monitoring
D. No need for follow-up

Q07-05. Which is a traditional immune-action term in uploaded notes?

A. Antibiotic certificate
B. Immunomodulator
C. Proven vaccine replacement
D. Absolute immunity

Q07-06. Which example is listed as an immunomodulator?

A. Ganoderma lucidum
B. Conium maculatum
C. Aconitum napellus
D. Digitalis purpurea

Q07-07. What is essential when transplant recipients request immune herbs?

A. Stop immunosuppressants
B. Ignore herb identity
C. Assume zero interaction
D. Coordinate with transplant prescriber/pharmacist

Q07-08. A suspected bacterial pneumonia requires what before adjunct claims?

A. Only topical botanicals
B. No medical assessment
C. Appropriate evaluation and evidence-based treatment
D. Vitamin marketing

Q07-09. Can a hawthorn supplement be assumed safe with multiple heart medicines?

A. Yes, all herbs are inert
B. No, interactions and clinical status require review
C. Yes, because it is a fruit
D. Yes, if on sale

Q07-10. Which best evaluates an “immune booster” study?

A. Clinically meaningful outcomes in appropriately designed trials
B. Only colourful packaging
C. Number of social-media likes
D. A single test tube result as proof

Q07-11. A patient with atrial fibrillation on anticoagulation wants ginkgo. What is the best response?

A. Use an unlabelled extract
B. Review bleeding risk and interactions before use
C. Assume ginkgo has no effect on hemostasis
D. Increase anticoagulant dose independently

Q07-12. Which plant contains highly potent cardiac glycosides and is unsafe as a self-prescribed herb?

A. Matricaria recutita
B. Althaea officinalis
C. Digitalis purpurea
D. Calendula officinalis

Q07-13. Which botanical is classically associated with the traditional category “cardiotonic” but is not a substitute for heart-failure therapy?

A. Aconitum napellus
B. Conium maculatum
C. Hyoscyamus niger
D. Crataegus spp. (hawthorn)

Q07-14. A patient taking digoxin asks whether lily of the valley is a safe heart tonic. What is safest?

A. Avoid; its cardiac glycosides can cause serious toxicity
B. Combine to enhance digoxin without monitoring
C. Use any amount if organic
D. Assume toxicity only occurs intravenously

Q07-15. A patient with uncontrolled hypertension takes large daily amounts of licorice root. What complication is most concerning?

A. Iron overload
B. Hypertension and hypokalemia
C. Isolated hypoglycemia only
D. Severe vitamin C deficiency

Q07-16. Which botanical is commonly called garlic?

A. Aloe vera
B. Arnica montana
C. Allium sativum
D. Allium cepa

Q07-17. Which botanically derived compound class explains the effect of foxglove?

A. Pyrrolizidine alkaloids
B. Anthocyanin dyes
C. Dietary fibre alone
D. Cardenolide cardiac glycosides

Q07-18. A diabetes patient on glucose-lowering medication asks about gymnema. What is the main clinical priority?

A. Monitor possible additive glucose-lowering effects and assess evidence
B. Stop prescribed medications immediately
C. Assume no glucose effects
D. Ignore hypoglycemia symptoms

Q07-19. Which botanical is commonly called reishi?

A. Gentiana lutea
B. Ganoderma lucidum
C. Ginkgo biloba
D. Glycyrrhiza glabra

Q07-20. A person receiving chemotherapy wants to take medicinal mushrooms to improve survival. What is the strongest response?

A. Replace anticancer medication
B. Assume all extracts are equivalent
C. Discuss with oncology team and avoid unsupported survival claims
D. Promise reduced cancer mortality

Q07-21. Which of the following refers to American ginseng?

A. Panax ginseng
B. Rhodiola rosea
C. Eleutherococcus senticosus
D. Panax quinquefolius

Q07-22. A patient with a new swollen painful leg asks for a “circulatory tonic.” What is first?

A. Urgent assessment for possible deep vein thrombosis
B. Start a vascular herb and recheck next year
C. Massage the swollen leg
D. Assume varicose veins

Q07-23. A person with stage 4 kidney disease asks for multiple “diuretic” herbs. What is important?

A. Ignore medication lists
B. Assess renal function, electrolytes and fluid status with the treating team
C. Assume every diuretic is safe in kidney disease
D. Increase dose until urine is clear

Q07-24. What does “immunomodulator” in a traditional herb table tell the student?

A. Safe use after transplant
B. Evidence of immune-system normalization
C. A proposed or traditional action that needs clinical validation
D. Guaranteed prevention of all infections

Q07-25. A transplant recipient on tacrolimus considers St. John's wort for stress. What should be done?

A. Use because it protects grafts
B. Stop tacrolimus abruptly
C. Double all herbal doses
D. Avoid unsupervised use due to reduced immunosuppressant exposure risk

Lesson 8: Skin, Wound Care and Anti-inflammatory Botanicals

25 practice questions. Circle or record the single best answer.

Q08-01. What does “vulnerary” mean in traditional action lists?

A. Supports tissue healing in historical terminology
B. Guarantees sterile wound care
C. Cures all skin infections
D. Removes all scarring

Q08-02. Which botanical is a traditional topical vulnerary?

A. Digitalis purpurea
B. Aconitum napellus
C. Conium maculatum
D. Calendula officinalis

Q08-03. What is the principal concern with oral comfrey?

A. Vitamin C overdose
B. Absence of any chemical constituents
C. Pyrrolizidine-alkaloid hepatotoxicity
D. Guaranteed detoxification

Q08-04. An herbal cream causes increasing rash and itching. What should happen?

A. Increase frequency
B. Stop and assess possible contact allergy
C. Cover indefinitely
D. Ignore symptoms

Q08-05. Which finding requires prompt evaluation in a wound?

A. Fever and rapidly spreading redness
B. Dry intact skin
C. Minimal transient itching
D. Normal wound closure

Q08-06. A product says “natural therefore safe on infant skin.” The correct response?

A. Always true
B. Never read labels
C. Use adult-strength oils
D. Safety depends on ingredients, dose and age

Q08-07. How should an old “skin alterative” claim be presented?

A. As established treatment for psoriasis
B. As guaranteed acne cure
C. As traditional use with uncertain disease-specific benefit
D. As substitute for dermatologic referral

Q08-08. What can cause injury with concentrated topical essential oils?

A. Automatic wound sterilization
B. Irritation or sensitization
C. Guaranteed analgesia
D. Removal of infection risk

Q08-09. Which information identifies a safe topical product?

A. Ingredients, formulation, lot and intended skin use
B. Only pleasant smell
C. Only bottle size
D. Only customer ratings

Q08-10. Which action is appropriate for severe burns?

A. Home herbal compress only
B. Ignore pain
C. Avoid any medical advice
D. Urgent evaluation and standard burn management

Q08-11. Which botanical is commonly called calendula?

A. Corydalis spp.
B. Calendula officinalis
C. Colchicum autumnale
D. Convallaria majalis

Q08-12. A patient develops spreading redness, fever and severe pain around a wound. What is the safest step?

A. Cover the wound and wait for weeks
B. Use an unsterile poultice
C. Urgent assessment for serious infection
D. Apply topical herbal oil as sole treatment

Q08-13. Which botanical should be avoided for internal use because of hepatotoxic pyrrolizidine alkaloids?

A. Matricaria recutita (chamomile)
B. Calendula officinalis (calendula)
C. Avena sativa (oat)
D. Symphytum officinale (comfrey)

Q08-14. A patient has allergic contact dermatitis after an arnica gel. What is the immediate action?

A. Stop the product and evaluate the reaction
B. Use more gel
C. Combine with another scented oil
D. Ignore worsening rash

Q08-15. Which form of Arnica montana is most likely to raise concern about toxic exposure?

A. Reading safety warnings
B. Swallowing concentrated arnica preparations
C. Use of a regulated labelled cosmetic as directed
D. Viewing a botanical drawing

Q08-16. Which plant is traditionally associated with topical astringent uses and known as witch hazel?

A. Hydrastis canadensis
B. Harpagophytum procumbens
C. Hamamelis virginiana
D. Humulus lupulus

Q08-17. A child with an extensive burn is brought to a clinic. What should happen first?

A. Apply concentrated essential oils
B. Use comfrey by mouth
C. Wait for a herbal dressing to work
D. Appropriate burn assessment and emergency treatment

Q08-18. A patient with rheumatoid arthritis asks whether turmeric is a replacement for methotrexate. What is best?

A. Explain it is not a proven substitute for disease-modifying therapy
B. Stop methotrexate without discussing rheumatology
C. Promise reversal of joint erosion
D. Use only turmeric for severe flare

Q08-19. Which botanical is called devil's claw in traditional anti-inflammatory tables?

A. Hyoscyamus niger
B. Harpagophytum procumbens
C. Hypericum perforatum
D. Hydrastis canadensis

Q08-20. A patient has worsening pain after topical capsaicin cream. Which adverse effect is plausible?

A. Permanent nerve regrowth
B. No skin effect possible
C. Local burning or irritation
D. Immediate cure of neuropathy

Q08-21. Which botanical contains salicin-related compounds and is known as white willow?

A. Salvia officinalis
B. Sambucus nigra
C. Silybum marianum
D. Salix alba

Q08-22. A patient with an aspirin-triggered reaction requests willow bark. What is safest?

A. Avoid unsupervised use and review salicylate sensitivity
B. Assume no cross-concern
C. Give higher doses than aspirin
D. Use it because it is a tree

Q08-23. What is a major problem with making nonsterile herbal dressings for deep wounds?

A. Botanicals cannot trigger allergy
B. Risk of contamination and delayed evidence-based care
C. They are always sterile once dry
D. Every wound heals without cleaning

Q08-24. Which botanical is frequently associated with the traditional “vulnerary” label in the uploaded notes?

A. Datura stramonium
B. Conium maculatum
C. Calendula officinalis
D. Atropa belladonna

Q08-25. A patient with a painless pigmented skin lesion that is changing shape requests a herbal cream. What should take priority?

A. A trial of caustic herbal paste
B. Ignore because there is no pain
C. Apply an unapproved escharotic
D. Assessment for possible skin cancer

Lesson 9: Reproductive and Endocrine Botanicals

25 practice questions. Circle or record the single best answer.

Q09-01. What must be considered first with amenorrhea in someone who could be pregnant?

A. Start emmenagogues
B. Use higher doses of uterine tonics
C. Ignore medication history
D. Pregnancy testing and appropriate assessment

Q09-02. Which historical category is assigned to Vitex in uploaded notes?

A. Antidote to cyanide
B. Potent antibiotic proven for sepsis
C. Endocrine or hormonal modulator
D. Cardiac glycoside

Q09-03. What is a high-risk feature in a proposed pennyroyal regimen?

A. Guaranteed pregnancy safety
B. Potential toxicity and pregnancy harm
C. No biological effects
D. It is equivalent to dietary mint

Q09-04. Which history is relevant in irregular menstruation?

A. Medications, pregnancy possibility and thyroid symptoms
B. Shoe brand
C. Hair colour only
D. Favourite tea

Q09-05. What is correct regarding infertility and botanical-only treatment?

A. All infertility responds to herbs
B. Labs are unnecessary
C. Pregnancy need not be excluded
D. Do not delay appropriate fertility evaluation

Q09-06. How should traditional “uterine tonic” language be interpreted?

A. Proof of prevention of miscarriage
B. A universal fertility cure
C. Historical category without assured clinical outcome
D. A substitute for prenatal care

Q09-07. Which patient group warrants especially cautious herbal review?

A. Only healthy adults
B. Pregnant or breastfeeding patients
C. Only people who dislike tea
D. Only people with no medicines

Q09-08. What additional information should be checked with black cohosh?

A. Product-specific evidence and liver safety concerns
B. Only bottle colour
C. A guarantee of estrogen equivalence
D. No medication list

Q09-09. Severe unilateral pelvic pain and positive pregnancy test requires what?

A. A home emmenagogue
B. Routine annual follow-up
C. Reassurance without examination
D. Urgent ectopic-pregnancy assessment

Q09-10. Which makes a botanical reproductive claim more reliable?

A. Traditional listing alone
B. Anecdotal social post
C. Good trials using the same preparation and relevant outcomes
D. A colourful chart

Q09-11. A patient with missed menses requests an emmenagogue herb. What is the most important initial test?

A. Sputum microscopy
B. Pregnancy test
C. Serum sodium alone
D. Throat culture

Q09-12. Which botanical is traditionally associated with menstrual-cycle regulation claims and called chaste tree?

A. Valeriana officinalis
B. Verbena officinalis
C. Vitex agnus-castus
D. Viburnum opulus

Q09-13. A patient has abnormal uterine bleeding with dizziness and syncope. What takes priority?

A. Only a uterine tonic tea
B. A home tincture without blood tests
C. Delay until next cycle
D. Urgent evaluation and stabilization

Q09-14. Why should a botanical formula labelled “uterine stimulant” be approached cautiously during pregnancy?

A. Potential effects on uterus and pregnancy; safety often unproven
B. Every uterine herb is a prenatal vitamin
C. Plant extracts are invariably safe in pregnancy
D. Pregnancy makes contraindications irrelevant

Q09-15. Which herb is commonly called black cohosh?

A. Avena sativa
B. Actaea racemosa
C. Arctium lappa
D. Artemisia annua

Q09-16. A patient with suspected hypothyroidism requests an iodine-rich seaweed extract. What is the priority?

A. Stop thyroid treatment
B. Use any dose without monitoring
C. Check thyroid function and iodine exposure before recommending
D. Assume seaweed normalizes every thyroid disorder

Q09-17. Which botanical is commonly called bladderwrack?

A. Foeniculum vulgare
B. Filipendula ulmaria
C. Fucus is a fungal genus only
D. Fucus vesiculosus

Q09-18. A pregnant patient asks about an herb “safe in natural form.” What is the best general principle?

A. Require product-specific pregnancy safety and indication review
B. Assume food use proves concentrated extract safety
C. Ignore developmental effects
D. Take extra doses to compensate for pregnancy

Q09-19. A patient with new galactorrhea, headache and missed periods requests Vitex. What should precede treatment?

A. Ignore visual symptoms
B. Evaluate pregnancy, medications and possible hyperprolactinemia
C. Prescribe solely based on traditional label
D. Assume a benign hormonal imbalance

Q09-20. Which botanical is generally associated with historical reproductive use and called cramp bark?

A. Vinca minor
B. Valeriana officinalis
C. Viburnum opulus
D. Vitex agnus-castus

Q09-21. A menopausal patient with postmenopausal vaginal bleeding requests a herbal hormone modulator. What should happen first?

A. Start herbs for six months before examining
B. Assume menopause explains it
C. Ignore cancer risk
D. Investigate postmenopausal bleeding

Q09-22. What is the correct interpretation of an herb described as a “progesterone precursor” in old lecture notes?

A. It does not prove clinically meaningful progesterone conversion in humans
B. It is interchangeable with prescribed progesterone
C. It cures infertility
D. It is safe in all pregnancies

Q09-23. A person starting fertility treatment uses multiple herbs with unknown hormonal effects. What is the safest approach?

A. Choose products by colour
B. Review supplements with the fertility team and assess interaction risks
C. Continue all without disclosure
D. Stop clinically indicated therapy

Q09-24. A patient on hormonal contraception requests St. John's wort. Which consequence is important?

A. Complete absence of any interaction
B. Reliable contraception replacement
C. Reduced contraceptive effectiveness and unintended pregnancy risk
D. Guaranteed improved contraceptive efficacy

Q09-25. A patient has severe pelvic pain and a positive pregnancy test. What is the immediate priority?

A. Give an emmenagogue to induce bleeding
B. Treat as simple menstrual cramps
C. Delay examination for herbal response
D. Urgent evaluation for ectopic pregnancy

Lesson 10: Toxic Constituents: Alkaloids, Glycosides and Organ Injury

25 practice questions. Circle or record the single best answer.

Q10-01. Which toxic class is associated with some comfrey preparations?

A. Vitamin B12
B. Essential fatty acids only
C. Unsaturated pyrrolizidine alkaloids
D. Soluble fibre

Q10-02. Aconitum poisoning may cause which emergency?

A. Only mild thirst
B. Malignant arrhythmia and neurological toxicity
C. Hair loss after years only
D. Transient food aversion

Q10-03. Datura stramonium contains which major toxic class?

A. Tropane alkaloids
B. Dietary fibre
C. Omega-3 lipids
D. Collagen peptides

Q10-04. Which is correct botanical identification?

A. Conium maculatum is water hemlock (Cicuta)
B. Both are harmless carrots
C. Conium is medicinal chamomile
D. Conium maculatum is poison hemlock

Q10-05. Digitalis glycosides may cause which complication?

A. Only mild rash
B. Purely benign sedation
C. Dysrhythmia
D. Complete absence of effect

Q10-06. What is incorrect in the historical note about gossypol?

A. It may be associated with cottonseed
B. It is classified as a furocoumarin
C. It has toxicological relevance
D. It is a plant-derived compound

Q10-07. Suspected ingestion of a poisonous plant calls for what?

A. Emergency or poison-centre consultation
B. Inducing vomiting at home
C. Waiting for a rash
D. Giving random antidote herbs

Q10-08. Which constituent group can release cyanide from some seeds?

A. Tannins exclusively
B. Mineral salts
C. Mucilage alone
D. Cyanogenic glycosides

Q10-09. Severe anticholinergic poisoning might cause what?

A. Low core temperature always
B. Guaranteed bradycardia
C. Delirium, mydriasis and tachycardia
D. Normal mental status by definition

Q10-10. Which source statement requires a modern correction?

A. Comfrey PA concerns
B. “Water hemlock” as the common name for Conium
C. Aconitum toxic potential
D. Digitalis glycosides

Q10-11. What is the principal serious adverse effect of unsaturated pyrrolizidine alkaloids?

A. Direct anticoagulation reversal
B. Hepatic injury including sinusoidal obstruction syndrome
C. Guaranteed cure of cirrhosis
D. Calcium deficiency alone

Q10-12. Which botanical is a high-risk source of aconitine alkaloids?

A. Achillea millefolium
B. Avena sativa
C. Aconitum napellus
D. Althaea officinalis

Q10-13. An adult develops ventricular arrhythmia after consuming unknown “monkshood” tea. What is the safest action?

A. Give another cup to induce tolerance
B. Observe at home without evaluation
C. Treat with a skin salve
D. Emergency toxicology and advanced cardiac care

Q10-14. Which plant is associated with anticholinergic tropane alkaloids such as atropine?

A. Atropa belladonna
B. Calendula officinalis
C. Taraxacum officinale
D. Althaea officinalis

Q10-15. Dilated pupils, dry flushed skin, hyperthermia and delirium after herbal ingestion suggest what toxidrome?

A. Iron overload
B. Anticholinergic poisoning
C. Isolated cholinergic excess
D. Simple dehydration only

Q10-16. Which herb is associated with potentially toxic cardiac glycosides and known as lily of the valley?

A. Cordyceps sinensis
B. Centella asiatica
C. Convallaria majalis
D. Calendula officinalis

Q10-17. Which plant in older notes was linked to toxic coniine and should never be used as a remedy?

A. Camellia sinensis
B. Cynara scolymus
C. Crataegus laevigata
D. Conium maculatum

Q10-18. A child accidentally swallows concentrated wintergreen oil. What toxicity should be suspected?

A. Salicylate poisoning
B. Only benign skin dryness
C. Magnesium toxicity
D. Vitamin B12 deficiency

Q10-19. What makes bitter apricot-kernel supplements a toxicological concern?

A. Protection against hypoxia
B. Potential cyanide release from cyanogenic glycosides
C. Guaranteed cancer prevention
D. No bioactive constituents

Q10-20. Which toxic mechanism is associated with foxglove?

A. Pure histamine release only
B. Simple sugar malabsorption
C. Inhibition of sodium-potassium ATPase by cardiac glycosides
D. Blockade of folate synthesis in bacteria

Q10-21. A “black salve” product is advertised to remove skin cancer. What is the critical safety concern?

A. It is a proven substitute for surgery
B. The caustic has no side effects
C. It always removes all malignant cells
D. Caustic tissue destruction can delay cancer diagnosis and treatment

Q10-22. Which plant is associated with the toxic irritant podophyllotoxin when improperly used?

A. Podophyllum peltatum
B. Panax quinquefolius
C. Passiflora incarnata
D. Plantago major

Q10-23. Which toxin type may result from mould-contaminated medicinal plants?

A. Only harmless proteins
B. Mycotoxins
C. Only purified vitamins
D. Guaranteed antibiotic production

Q10-24. Which symptom combination following a suspect botanical suggests possible acute liver injury?

A. Occasional sneezing
B. Normal vital signs alone
C. Jaundice, dark urine and right-upper-quadrant pain
D. Only mild thirst after exercise

Q10-25. A concentrated unknown plant extract causes seizures. Which response is appropriate?

A. Induce vomiting without advice
B. Give an additional dose
C. Offer only tea and rest
D. Activate emergency services and poison-centre assessment

Lesson 11: Herb–Drug Interactions, Contraindications and Patient Safety

25 practice questions. Circle or record the single best answer.

Q11-01. St. John’s wort can lower some drug exposures mainly through what?

A. Antacid buffering only
B. Metabolic/transporter induction
C. Destruction of all drugs in the stomach
D. No pharmacologic mechanism

Q11-02. Which interaction may compromise contraceptive effectiveness?

A. St. John’s wort with hormonal contraception
B. Food-level chamomile with water
C. Topical calendula with soap
D. Ordinary apple consumption

Q11-03. What can occur when sertraline is combined with St. John’s wort?

A. Guaranteed improved safety
B. No change in adverse effects
C. Absolute protection against depression
D. Serotonergic toxicity

Q11-04. NCCIH reports that goldenseal can reduce exposure to which drug in a study?

A. Vitamin C
B. Saline
C. Metformin
D. Calcium carbonate alone

Q11-05. What is a potential danger of glycyrrhizin-rich licorice?

A. Hypercalcemia always
B. Hypokalemia and hypertension
C. Permanent immunity
D. Guaranteed glucose normalization

Q11-06. Which product has been linked with rare severe liver injury?

A. Kava
B. Purified water
C. Food-grade salt
D. Air-dried oats

Q11-07. Which factors should be checked before adding an herb to anticoagulant therapy?

A. Only product taste
B. Colour preferences
C. Outdoor temperature
D. Bleeding risk and medication interactions

Q11-08. How should suspected interaction be managed?

A. Keep adding products
B. Ignore new symptoms
C. Review all products and consult prescriber/pharmacist
D. Stop critical drugs without consultation

Q11-09. Which patient requires extra careful herbal review?

A. Healthy person with no exposures only
B. Person with liver disease taking multiple prescriptions
C. Everyone has identical risk
D. Person choosing herb by logo

Q11-10. What is essential on an interaction checklist?

A. Drug, botanical species, dose and start/stop dates
B. Only product price
C. Only favourite herb
D. Only delivery address

Q11-11. A patient on oral contraceptives starts St. John's wort. What is the key pharmacokinetic mechanism?

A. Direct synthesis of estrogen
B. Induction of metabolic enzymes and transporters
C. Permanent inhibition of all drug metabolism
D. Complete absence of interactions

Q11-12. A patient takes warfarin and wishes to add a multiherb product. What is the best initial step?

A. Increase warfarin dose independently
B. Avoid asking about supplements
C. Review ingredients and interaction evidence; coordinate INR monitoring when indicated
D. Assume herbal products cannot affect anticoagulation

Q11-13. A person on digoxin uses licorice and develops low potassium. Why is this especially concerning?

A. Potassium has no cardiac role
B. Licorice neutralizes digoxin
C. This proves digoxin is ineffective
D. Hypokalemia can increase susceptibility to digoxin toxicity

Q11-14. Which medication history is most important before recommending a sedating botanical?

A. Opioids, benzodiazepines and alcohol use
B. Only vitamin C intake
C. Only shoe size
D. Only hair colour

Q11-15. A patient with chronic liver disease requests kava. Which advice best reflects risk?

A. Ignore transaminases
B. Avoid unsupervised use because of possible liver injury
C. Use because it cannot be hepatotoxic
D. Increase alcohol intake with kava

Q11-16. A patient develops weakness, edema and hypertension while taking licorice. What laboratory abnormality is plausible?

A. Low blood glucose invariably
B. Severe hypercalcemia in every patient
C. Low serum potassium
D. High hemoglobin invariably

Q11-17. A diabetic patient starts an herbal glucose-lowering supplement. What is the most important outcome to monitor?

A. Eye colour
B. Only supplement smell
C. Shelf label design
D. Hypoglycemia symptoms and glucose readings

Q11-18. Why should a planned surgery trigger a supplement medication review?

A. Bleeding, sedation, blood pressure and drug-interaction risks can affect perioperative care
B. Natural products do not affect anesthesia
C. Herbs replace preoperative assessment
D. Only labelled prescriptions matter

Q11-19. A patient takes tacrolimus after kidney transplantation. What is the main concern with St. John's wort?

A. Guaranteed elimination of infections
B. Reduced tacrolimus levels and rejection risk
C. Guaranteed improved graft survival
D. No role for CYP metabolism

Q11-20. Which action is best if a botanical product contains ingredients with unclear identities?

A. Use only half the unknown dose
B. Trust the word “traditional”
C. Avoid dispensing until each ingredient is verified
D. Assume all unknown ingredients are inert

Q11-21. A patient on apixaban takes ginkgo and develops easy bruising. What should be evaluated?

A. Only herbal taste
B. Only product advertising
C. Assume bruising unrelated to any drugs
D. Bleeding severity, medication exposures and interaction potential

Q11-22. What is the best response to a patient who says “my doctor doesn't need to know my supplements”?

A. Encourage disclosure because supplements can alter treatment safety
B. Agree that botanicals are never medicines
C. Suggest avoiding medication lists
D. Provide a secret second formula

Q11-23. Which population deserves particularly cautious herbal prescribing because fetal exposure and safety data may be uncertain?

A. Gardeners only
B. Pregnant patients
C. Healthy adult volunteers only
D. People reading product labels

Q11-24. A patient with renal failure takes a concentrated unknown herbal mixture. What additional concern applies?

A. No possibility of interaction
B. Automatic dialysis replacement
C. Accumulation, electrolyte effects and contamination
D. Guaranteed improved clearance

Q11-25. A suspected serious adverse reaction to a Canadian natural health product is identified. What should the clinician consider?

A. Destroy all records
B. Report only if the product lacks an NPN
C. Conceal details to protect the seller
D. Document, manage, and report through the appropriate Health Canada pathway

Lesson 12: Evidence Appraisal, Canadian Regulation and Integrated Cases

25 practice questions. Circle or record the single best answer.

Q12-01. What does a Canadian NPN identify?

A. A licensed natural health product for labelled conditions of use
B. A cure for all diseases
C. Approval of every online claim
D. Guaranteed absence of side effects

Q12-02. What evidence best establishes human efficacy?

A. Only in-vitro data
B. Only historical praise
C. Only sales volume
D. Appropriate controlled clinical studies with relevant outcomes

Q12-03. Why might evidence on one standardized extract not apply to a generic tea?

A. They are always identical
B. Teas never contain compounds
C. Constituents, dose and exposure may differ
D. All brands have same formulation

Q12-04. Which is part of informed consent for an herbal adjunct?

A. Only product advertising
B. Benefits, uncertainty, alternatives, risks and monitoring
C. No discussion of medication risks
D. Guarantee of cure

Q12-05. What follows a serious suspected botanical adverse event?

A. Clinical assessment, documentation and reporting as applicable
B. Destroy the batch number
C. Ignore it if labelled natural
D. Automatically double the dose

Q12-06. A patient with cancer is offered an herb labelled “NPN.” What should be clarified?

A. All cancers are cured by NPN products
B. Oncology therapy should be stopped
C. No need to inspect authorized claims
D. NPN does not prove the advertised cancer cure

Q12-07. What is a clinically meaningful outcome in a symptom trial?

A. Bottle design
B. Page view count
C. A prespecified patient-relevant function or symptom score
D. Manufacturer popularity

Q12-08. Which difference separates traditional use from clinical proof?

A. A traditional label proves a cure
B. Controlled evidence of benefit and harm is required for efficacy claims
C. All old claims are equally supported
D. Historical use eliminates risk

Q12-09. Why review an herb’s full current product label?

A. It states licensed use, ingredients, dose and cautions
B. It is always a substitute for history
C. It proves no interactions
D. It guarantees efficacy for any condition

Q12-10. Which is the best final step in an adjunct treatment plan?

A. Allow indefinite unsupervised use
B. Ignore treatment goals
C. Assume no harm
D. Set follow-up, stopping rules and safety reporting plan

Q12-11. What does an eight-digit NPN on a Canadian natural health product indicate?

A. Approval as a prescription antibiotic
B. Health Canada product authorization for specified conditions of use
C. Proof the product treats every disease
D. Guaranteed absence of side effects

Q12-12. Where can a student verify a Canadian natural health product's licence and labelled indications?

A. A retail influencer page
B. A random blog
C. Health Canada's Licensed Natural Health Products Database
D. A social media advertisement

Q12-13. An herb is shown to inhibit bacteria in a laboratory dish. Which evidence statement is correct?

A. It cures all UTIs
B. It replaces antibiotics for sepsis
C. It must be safe in newborns
D. Clinical effectiveness in humans remains unproven without appropriate studies

Q12-14. A clinical trial reports reduced symptom scores but no clinically meaningful improvement. What matters most?

A. Magnitude and patient relevance of the effect, not only a P value
B. Only whether P is less than 0.05
C. Only the journal cover
D. Only that any difference occurred

Q12-15. A case has dysuria, fever and flank pain. What is the safest disposition?

A. Assume uncomplicated cystitis
B. Evaluate for pyelonephritis and indicated antimicrobial care
C. Begin bearberry alone
D. Delay while testing five teas

Q12-16. A case has acute severe flank pain with fever and suspected obstructing stone. What is required?

A. Delay until spontaneous passage
B. Avoid medical imaging categorically
C. Urgent assessment for infected obstruction
D. Only diuretic herbs

Q12-17. A patient with chronic hepatitis B wishes to use an herbal antiviral blend instead of indicated treatment. What is correct?

A. Herbs are equivalent to antiviral medication
B. Liver tests are unnecessary
C. The herbal label proves viral suppression
D. Use evidence-based hepatology care; discuss herbal products only as possible adjuncts with safety review

Q12-18. What is the main limitation of an uncontrolled case series describing improvements after an herbal formula?

A. Confounding and spontaneous recovery cannot be ruled out
B. It proves causation
C. It guarantees no selection bias
D. It establishes optimal dose

Q12-19. What study design generally provides stronger evidence for an intervention's comparative efficacy?

A. Manufacturer product description
B. Well-designed randomized controlled trial
C. Retail product testimonial
D. Uncontrolled social media poll

Q12-20. Which patient outcome is most relevant when assessing a botanical for chronic insomnia?

A. Bottle illustration
B. Number of likes on a post
C. Validated sleep and daytime-function measures plus adverse effects
D. Number of herb names memorized

Q12-21. What does the clinical-sciences reference guide emphasize about exam questions?

A. Only memorizing a single school curriculum
B. Questions exclusively about herbal recipes
C. Only historical Latin spellings
D. Case-based and stand-alone application of entry-level competence

Q12-22. Does the overall 55–59% modalities blueprint mean 55–59% botanical questions?

A. No; modalities include multiple therapeutic areas
B. Yes; all modality questions are botany
C. Yes; the herbal course is the whole exam
D. No; modalities are excluded from the exam

Q12-23. Which is the best response if a Canadian NPN database record shows a product licence is cancelled?

A. Reassign another product's NPN
B. Do not assume continued lawful authorization; verify current status before sale/use
C. Trust a printed old label only
D. Ignore the database

Q12-24. A patient starts an adjunct botanical with uncertain benefit. Which follow-up plan is best?

A. Ignore new medication changes
B. Measure only product cost
C. Set measurable goals, adverse-event checks and clear stopping criteria
D. Continue indefinitely regardless of outcome

Q12-25. Which approach to a simulated herbal case best matches clinical reasoning competencies?

A. Choose the most herbs without assessment

B. Ignore laboratory results and pregnancy

C. Select a prescription by plant popularity

D. Identify red flags, differential diagnosis, medication interactions, evidence and disposition

Answer Key and Explanations

The explanations are concise revision notes. Verify dose- and product-specific decisions from current approved labelling and clinical references.

Lesson 1: Answers

Q01-01 — D. Verified Latin species and plant part. Common names can hide differing species and constituent profiles.

Q01-02 — C. Soothing mucilage-containing preparations. Demulcents traditionally soothe irritated tissues via mucilaginous preparations.

Q01-03 — B. Mentha piperita. Peppermint appears in the historical carminative category for digestive discomfort.

Q01-04 — A. A historical herbal-action category, not proven efficacy. Action terminology is not a clinical effectiveness guarantee.

Q01-05 — D. Activity in that model; clinical efficacy remains uncertain. In-vitro activity alone does not demonstrate benefit in human disease.

Q01-06 — C. Extract ratio and standardization. Different extract strengths cannot be assumed bioequivalent.

Q01-07 — B. Tannins. Tannins commonly underlie traditional astringent effects.

Q01-08 — A. “Traditionally used; effectiveness uncertain”. Separate historical use from established evidence.

Q01-09 — D. Plant part and preparation. Part, form and strength meaningfully change exposure.

Q01-10 — C. Clinical assessment for underlying causes. Diagnosis and urgent causes precede botanical selection.

Q01-11 — B. Actaea racemosa and plant part. Latin binomial and plant part distinguish clinically different raw materials.

Q01-12 — C. Althaea officinalis. Althaea officinalis is traditionally classified as a mucilage-rich demulcent.

Q01-13 — D. Achillea millefolium. Achillea millefolium is yarrow in the medicinal plant nomenclature list.

Q01-14 — A. Traditional action labels do not establish clinical benefit. Traditional categories must not be confused with validated oncology outcomes.

Q01-15 — B. Actaea racemosa and Cimicifuga racemosa. Actaea racemosa is a name used for black cohosh, also commonly cited as Cimicifuga racemosa.

Q01-16 — C. Gentiana lutea. Gentian root is a classic bitter botanical; a historical category is not a universal indication.

Q01-17 — D. Helping limit minor local bleeding. Styptic denotes a local hemostatic action; significant bleeding requires medical evaluation.

Q01-18 — A. Different plant parts can have different traditional uses. Even within Taraxacum officinale the plant part matters for traditional classification and composition.

Q01-19 — B. It supports a hypothesis, not proven clinical benefit. Animal findings do not substitute for human effectiveness and safety data.

Q01-20 — C. Small volatile molecules whose handling may affect retention. Volatile oils can be lost or changed during heating and storage.

Q01-21 — D. Tannins. Tannins may bind proteins and are associated with astringent properties.

Q01-22 — A. Accepted synonyms and authoritative taxonomic naming. Nomenclature can change; accepted synonyms prevent medication and identity errors.

Q01-23 — B. Species, plant part, formulation and concentration. Commercial products with the same common name can have different plant species and exposures.

Q01-24 — C. Review plant-family cross-reactivity and avoid if relevant. Chamomile belongs to Asteraceae; relevant allergy histories matter.

Q01-25 — D. Ginkgo. Ginkgo biloba is a distinct tree species with its own risk and evidence profile.

Lesson 2: Answers

Q02-01 — C. Separating desired leaves or flowers from stems. Garbling removes unwanted plant material after harvest.

Q02-02 — B. It limits mould without excessive constituent degradation. Moisture and inappropriate heat compromise quality.

Q02-03 — A. Mistaken species identification. Wild collection requires identification and contaminant controls.

Q02-04 — D. Use species-specific validated collection timing. Historical rules of thumb differ between species.

Q02-05 — C. Supplier, lot number and harvest/production details. Traceability supports recall and quality review.

Q02-06 — B. Fungal or mycotoxin risk. Moisture creates conditions for microbial spoilage.

Q02-07 — A. Possible degradation of heat/light-sensitive constituents. Light can degrade some constituents.

Q02-08 — D. Quarantine pending verification. Sensory inspection alone cannot authenticate botanical identity.

Q02-09 — C. Heavy metals. Plants can accumulate environmental contaminants.

Q02-10 — B. As a rough historical statement, not universal stability data. Shelf-life depends on product and conditions.

Q02-11 — B. Species and plant-part authentication. Unknown botanical identity is a serious dispensing and contamination risk.

Q02-12 — C. Reject or quarantine the batch. Visible mould may indicate contamination and possible mycotoxins.

Q02-13 — D. Collection location, date, species and lot identity. Traceability permits recall, quality investigation and environmental review.

Q02-14 — A. Heavy-metal and environmental contamination. Growing conditions may introduce contaminants not removed by ordinary preparation.

Q02-15 — B. Validated identification testing against authenticated reference material. Powdered plant materials are difficult to identify visually; validated verification is preferable.

Q02-16 — C. Verified sustainable or cultivated supply. Conservation and provenance are part of responsible botanical sourcing.

Q02-17 — D. Natural materials vary and may need standardization. Constituents vary with growing, harvest and manufacturing conditions.

Q02-18 — A. Spread thinly with suitable airflow. Air circulation helps reduce slow drying and fungal spoilage.

Q02-19 — B. Do not dispense until documentation is resolved. Missing lot and stability data impair safe traceability and product assessment.

Q02-20 — C. The supplied plant part has not been independently authenticated. Authentication must match the actual material supplied.

Q02-21 — D. Lot number associated with dispensing records. Lot traceability allows patients receiving affected products to be identified.

Q02-22 — A. Heat and light can alter or degrade constituents. Excessive heat and sunlight can damage some compounds.

Q02-23 — B. Rely on product-specific stability and labelled expiry. Generic shelf-life rules do not replace evidence for individual products.

Q02-24 — C. Quarantine and investigate or reject it. Failed microbial testing requires disposition under quality procedures.

Q02-25 — D. Voucher specimen and validated species identification. A verified botanical reference supports identity confirmation.

Lesson 3: Answers

Q03-01 — B. Tender leaves and flowers. Infusion suits many soft aerial parts.

Q03-02 — A. Heating harder plant material for extraction. Decoction applies controlled heating to roots or bark in many traditional methods.

Q03-03 — D. Initial herb mass to liquid volume ratio. Extraction ratios are not direct measurements of active concentration.

Q03-04 — C. It affects extraction and exposure. Solvent strength changes extraction profiles.

Q03-05 — B. Concentrated constituents can irritate or be toxic. Concentration and route drive exposure and toxicity.

Q03-06 — A. Different constituent concentrations. Standardization and extraction yield may differ.

Q03-07 — D. Water content changes ratio interpretation. Starting material affects extraction ratios.

Q03-08 — C. Verify identity, batch and expiry. Quality checks accompany dispensing.

Q03-09 — B. Avoid self-directed use; assess pediatric risk and approved care. Concentrated oils can be toxic to children.

Q03-10 — A. Topical salve or cream. Topical botanicals can still cause allergy and systemic exposure.

Q03-11 — B. Infusion. Many tender flowers are suited to an infusion.

Q03-12 — C. Tough root or bark. Decoction uses sustained heating, often for tougher material.

Q03-13 — D. 500 mL. A common 1:5 w/v preparation uses 100 g of dry herb to 500 mL extraction solvent; it does not guarantee a fixed active dose.

Q03-14 — A. Ethanol content in liquid extracts. Tinctures may contain substantial ethanol, which affects suitability.

Q03-15 — B. The concentrated oil differs greatly in strength and safety. Extraction and concentration alter exposure and potential toxicity.

Q03-16 — C. A measured content specification for that marker. Marker standardization is not the same as an established clinical outcome.

Q03-17 — D. Oral ingestion. Some essential oils cause severe poisoning when swallowed by young children.

Q03-18 — A. Label each authenticated ingredient before compounding. Validated identity and batch segregation are fundamental.

Q03-19 — B. Stop the product and assess contact dermatitis. Topical botanicals and excipients can cause contact sensitization.

Q03-20 — C. Alcohol percentage and extraction ratio vary by preparation. Different extraction methods change composition.

Q03-21 — D. Reduce loss of volatile aromatic components. Covering can help retain volatile aromatic components during steeping.

Q03-22 — A. Consider concentration, extraction and validated reference dose. Preparation forms differ in extract yield and composition.

Q03-23 — B. Starting water content and extraction differ. Plant moisture and menstruum alter the meaning of extract ratios.

Q03-24 — C. Do not inject nonsterile herbal preparations. Homemade infusions lack sterility, pyrogen testing and approved injectable formulation.

Q03-25 — D. Temperature and extraction conditions. Extraction temperature and time alter the constituents extracted.

Lesson 4: Answers

Q04-01 — A. Confirm the working clinical assessment. Formulation should begin with an assessment, not a product.

Q04-02 — D. Latin name, part, strength, route, dose, duration. Prescribing documentation must identify the actual product and regimen.

Q04-03 — C. 50 percent. 30 divided by 60 equals one half.

Q04-04 — B. It may omit updated pregnancy and drug risks. Older notes must be re-screened against current knowledge.

Q04-05 — A. Defined goals, evidence and reassessment. Set start, monitoring and stop criteria.

Q04-06 — D. Easier attribution of benefit, harm and interactions. Polyherbal complexity complicates assessment.

Q04-07 — C. Ingredient amount divided by total mixture. A percentage describes relative component quantity.

Q04-08 — B. Study of doses and dose regimens. Posology concerns dosage, frequency and administration.

Q04-09 — A. Alcohol content and patient-specific contraindications. Ethanol exposure and formulation risk can matter.

Q04-10 — D. Before or at initiation of any monitored trial. Monitoring is part of informed prescribing.

Q04-11 — B. Investigate alarm features and arrange appropriate medical assessment. Alarm symptoms may signal serious disease requiring investigation.

Q04-12 — C. Allow reproducible dose and safety review. Formulation documentation must permit accurate exposure calculations.

Q04-13 — D. 2 mL. 0.25 × 8 mL = 2 mL of the tincture per day.

Q04-14 — A. 100%. These percentages correctly add to 100% of the mixture.

Q04-15 — B. 15 mL. TID is three times a day; 5 mL × 3 = 15 mL/day.

Q04-16 — C. 280 mL. 10 × 2 × 14 = 280 mL; allow separately for dispensing losses.

Q04-17 — D. Patient condition, interactions and current product concentration may differ. Historical educational doses are not patient-specific prescriptions.

Q04-18 — A. Latin binomial, plant part, formulation, concentration, dose and route. Complete specifications reduce dispensing and administration errors.

Q04-19 — B. 500 mL. Total required is 5 × 3 × 30 = 450 mL, so 500 mL suffices before allowance for loss.

Q04-20 — C. Unvalidated mechanism and missing differential diagnosis. Treatment must be anchored to an appropriate clinical assessment.

Q04-21 — D. PRN. PRN (pro re nata) refers to administration as required, with limits documented.

Q04-22 — A. A specific interaction review and anticoagulation care plan. Drugs with narrow therapeutic indices warrant specific interaction assessment.

Q04-23 — B. Baseline and follow-up sleep measures and adverse effects. Prespecified patient-important outcomes allow meaningful reassessment.

Q04-24 — C. Record start dates, dose, timing, other drugs and dechallenge response. Systematic exposure history is essential for adverse-event evaluation.

Q04-25 — D. Patient-specific risks, product strength and evidence must be considered. A reference range requires clinical context and current formulation verification.

Lesson 5: Answers

Q05-01 — D. Withania somnifera. Withania somnifera is the botanical binomial for ashwagandha.

Q05-02 — C. Traditional energetic teaching, not comparative trial evidence. The source comparison itself warns the ranking is not absolute.

Q05-03 — B. Rare liver injury and thyroid/medication interactions. Modern monographs identify liver and thyroid-related concerns.

Q05-04 — A. Sedative or nervine. Valerian is traditionally discussed as a sedative herb.

Q05-05 — D. Screen for additive sedation and impaired function. Combined sedatives can impair alertness.

Q05-06 — C. Hypericum perforatum. St. John’s wort interacts with multiple medicines.

Q05-07 — B. Serotonin toxicity. Serotonergic combinations may be dangerous.

Q05-08 — A. Urgent mental-health safety assessment. Potential self-harm requires appropriate safety care.

Q05-09 — D. Limited and formulation-specific. Evidence cannot be transferred across all preparations.

Q05-10 — C. Historical stress-response category. The traditional category is not an established disease treatment.

Q05-11 — B. Serotonergic toxicity and pharmacokinetic interactions. Hypericum perforatum interacts with serotonergic and many other medicines.

Q05-12 — C. Withania somnifera. Withania somnifera is the botanical name associated with ashwagandha.

Q05-13 — D. Piper methysticum (kava). Kava products have significant liver and sedation safety concerns.

Q05-14 — A. Avena sativa. Oat (Avena sativa) is described as a traditional nervine in the lecture material.

Q05-15 — B. Review thyroid status, medications and adverse-effect reports before use. Ashwagandha may affect thyroid physiology and has reported adverse effects.

Q05-16 — C. Potential additive sedation and impairment. Sedative botanical combinations can increase CNS depression.

Q05-17 — D. Rhodiola rosea. Rhodiola is commonly categorized as an adaptogen, but clinical effects vary by product and evidence.

Q05-18 — A. A traditional or research category, not proof of clinical benefit. The category alone does not establish efficacy for chronic fatigue or stress disorders.

Q05-19 — B. Urgent risk assessment and appropriate mental health care. Suicidal ideation takes precedence over selection of a sedative botanical.

Q05-20 — C. Passiflora incarnata. Passiflora incarnata is passionflower, historically used as a calming herb.

Q05-21 — D. Stop suspected product and seek urgent evaluation for liver injury. Jaundice in this setting requires immediate assessment of potential liver injury.

Q05-22 — A. Panax quinquefolius. Panax quinquefolius and Panax ginseng are distinct species.

Q05-23 — B. Confirm exact species and evidence because the term covers different plants. Common trade names obscure botanical differences.

Q05-24 — C. Scutellaria lateriflora. Scutellaria lateriflora (skullcap) has traditional nervine use, not proven equivalence to antidepressants.

Q05-25 — D. Other sedatives, alcohol use, driving and fall risk. Additive sedation and functional impairment are key safety considerations.

Lesson 6: Answers

Q06-01 — C. Althaea officinalis and Ulmus rubra. Mucilaginous herbs are typical demulcents.

Q06-02 — B. Gastroesophageal reflux. Peppermint can relax the lower esophageal sphincter and worsen reflux.

Q06-03 — A. Glycyrrhiza glabra. Glycyrrhizin-containing licorice can alter BP and potassium.

Q06-04 — D. Traditional category only, not a hepatitis cure. Action labels cannot replace disease-specific evidence.

Q06-05 — C. Unexplained gastrointestinal bleeding. Bleeding warrants clinical assessment.

Q06-06 — B. Assess respiratory emergency and standard care. Severe breathlessness should not be managed with herbal substitution.

Q06-07 — A. Foeniculum vulgare. Fennel is a historical carminative example.

Q06-08 — D. Route and concentrated versus food-level exposure. Concentrated oils and route matter.

Q06-09 — C. Promotes bile flow/release. Cholagogue is an action term, not a medical diagnosis.

Q06-10 — B. Defined indication, interaction review and follow-up. A bounded monitored plan reduces harm.

Q06-11 — B. Foeniculum vulgare. Fennel is a classic carminative in botanical-action tables.

Q06-12 — C. Zingiber officinale. Zingiber officinale is ginger, investigated for various nausea settings.

Q06-13 — D. Evaluate alarm symptoms rather than treating presumptive dyspepsia. Dysphagia and weight loss require evaluation for significant disease.

Q06-14 — A. Mentha piperita. Mentha piperita is peppermint, traditionally categorized as a digestive carminative.

Q06-15 — B. Althaea officinalis. Marshmallow's mucilage underpins its demulcent classification.

Q06-16 — C. Hepatic assessment and guideline-directed infection management. Chronic viral hepatitis with alarm features needs standard assessment and treatment decisions.

Q06-17 — D. Glycyrrhiza glabra. Licorice root contains glycyrrhizin, relevant to mineralocorticoid-type toxicity.

Q06-18 — A. Prompt evaluation for pulmonary red flags. Hemoptysis and dyspnea require clinical assessment.

Q06-19 — B. Taraxacum officinale radix. Radix is root, while folia means leaf; plant part matters.

Q06-20 — C. Possible biliary obstruction requires assessment before stimulating bile flow. Suspected biliary obstruction is not a reason for unsupervised choleretic treatment.

Q06-21 — D. Silybum marianum. Milk thistle is Silybum marianum; disease-specific efficacy is not established by the common name.

Q06-22 — A. Urgent assessment, rehydration and indicated diagnostic/treatment pathway. Bloody diarrhea with systemic symptoms is potentially serious infection.

Q06-23 — B. Expectorant. Traditional expectorants aim to assist clearance of respiratory secretions.

Q06-24 — C. A marketing claim is not proof of antiviral efficacy. Condition-specific efficacy requires appropriate evidence; hepatotoxicity is also a concern.

Q06-25 — D. Relaxation of lower esophageal sphincter tone. Peppermint can aggravate reflux in some patients; assess individual symptoms.

Lesson 7: Answers

Q07-01 — B. Cardiac glycoside toxicity. Cardiac glycosides have narrow safety margins.

Q07-02 — A. Cardiotoxic glycosides. Lily of the valley contains cardiac glycosides.

Q07-03 — D. Traditional classification; not a substitute for heart-failure therapy. Claims need clinical evidence and medication safety review.

Q07-04 — C. Hypoglycemia risk and glucose monitoring. Additive glucose changes can create risk.

Q07-05 — B. Immunomodulator. The classification is conceptual, not proof of clinical efficacy.

Q07-06 — A. Ganoderma lucidum. Ganoderma appears in traditional immunomodulator notes.

Q07-07 — D. Coordinate with transplant prescriber/pharmacist. Transplant medicine exposure and immune effects are high stakes.

Q07-08 — C. Appropriate evaluation and evidence-based treatment. Do not replace effective antimicrobial or urgent care.

Q07-09 — B. No, interactions and clinical status require review. Cardiac status and medications alter safety.

Q07-10 — A. Clinically meaningful outcomes in appropriately designed trials. Claims require relevant human outcomes.

Q07-11 — B. Review bleeding risk and interactions before use. Potential interaction and bleeding concerns warrant medication reconciliation.

Q07-12 — C. Digitalis purpurea. Foxglove contains potent cardioactive compounds with a narrow toxic margin.

Q07-13 — D. Crataegus spp. (hawthorn). Hawthorn appears in historical cardiotonic teaching; clinical treatment must remain evidence-based.

Q07-14 — A. Avoid; its cardiac glycosides can cause serious toxicity. Convallaria majalis is a potentially dangerous cardiac-glycoside plant.

Q07-15 — B. Hypertension and hypokalemia. Glycyrrhizin can cause apparent mineralocorticoid excess with potassium loss and raised blood pressure.

Q07-16 — C. Allium sativum. Allium sativum is garlic; intake and preparation should be documented when reviewing bleeding or drug interactions.

Q07-17 — D. Cardenolide cardiac glycosides. Cardiac glycosides inhibit Na+/K+-ATPase and have a narrow safety margin.

Q07-18 — A. Monitor possible additive glucose-lowering effects and assess evidence. Gymnema has traditional glucose-related uses; combination requires attention to glucose control.

Q07-19 — B. Ganoderma lucidum. Ganoderma is the mushroom called reishi in many botanical sources.

Q07-20 — C. Discuss with oncology team and avoid unsupported survival claims. Potential interactions and limited condition-specific evidence require coordinated care.

Q07-21 — D. Panax quinquefolius. Panax quinquefolius is American ginseng, not synonymous with P. ginseng.

Q07-22 — A. Urgent assessment for possible deep vein thrombosis. Suspected DVT should not be managed with herbal remedies in place of diagnostic care.

Q07-23 — B. Assess renal function, electrolytes and fluid status with the treating team. Renal impairment increases risks from fluid/electrolyte shifts and contaminants.

Q07-24 — C. A proposed or traditional action that needs clinical validation. The action label does not quantify clinical outcomes or transplant safety.

Q07-25 — D. Avoid unsupervised use due to reduced immunosuppressant exposure risk. St. John's wort can induce drug-metabolizing pathways and jeopardize transplantation therapy.

Lesson 8: Answers

Q08-01 — A. Supports tissue healing in historical terminology. It describes a traditional wound-healing role, not proven efficacy.

Q08-02 — D. Calendula officinalis. Calendula is listed as vulnerary in the source notes.

Q08-03 — C. Pyrrolizidine-alkaloid hepatotoxicity. Unsaturated PA exposure can injure the liver.

Q08-04 — B. Stop and assess possible contact allergy. Topical botanicals can cause sensitization.

Q08-05 — A. Fever and rapidly spreading redness. Spreading infection is a red flag.

Q08-06 — D. Safety depends on ingredients, dose and age. Infants may have heightened exposure and sensitivity.

Q08-07 — C. As traditional use with uncertain disease-specific benefit. Historical categories do not establish efficacy.

Q08-08 — B. Irritation or sensitization. Essential oils can irritate and trigger allergy.

Q08-09 — A. Ingredients, formulation, lot and intended skin use. Labelled identity and quality remain essential.

Q08-10 — D. Urgent evaluation and standard burn management. Severe burns require clinical care.

Q08-11 — B. Calendula officinalis. Calendula officinalis is calendula, traditionally associated with topical skin care.

Q08-12 — C. Urgent assessment for serious infection. Systemic symptoms and spreading infection warrant urgent evaluation.

Q08-13 — D. Symphytum officinale (comfrey). Comfrey contains pyrrolizidine alkaloids associated with severe hepatic injury.

Q08-14 — A. Stop the product and evaluate the reaction. Arnica and other botanicals can produce hypersensitivity reactions.

Q08-15 — B. Swallowing concentrated arnica preparations. Oral ingestion of pharmacologically active arnica preparations can cause toxicity.

Q08-16 — C. Hamamelis virginiana. Witch hazel is Hamamelis virginiana, used in some topical preparations.

Q08-17 — D. Appropriate burn assessment and emergency treatment. Burn depth and extent require timely standard care.

Q08-18 — A. Explain it is not a proven substitute for disease-modifying therapy. RA needs disease-modifying treatment to reduce irreversible joint damage.

Q08-19 — B. Harpagophytum procumbens. Devil's claw is Harpagophytum procumbens; assess product-specific evidence and cautions.

Q08-20 — C. Local burning or irritation. Capsaicin may cause local burning; use only in appropriate labelled formulations.

Q08-21 — D. Salix alba. Salix alba is willow, associated with salicylate-related cautions.

Q08-22 — A. Avoid unsupervised use and review salicylate sensitivity. Willow products may contain salicylate-related constituents and are unsuitable for some patients.

Q08-23 — B. Risk of contamination and delayed evidence-based care. Serious wounds require appropriate wound care and infection prevention.

Q08-24 — C. Calendula officinalis. Calendula is classified as a vulnerary in traditional teaching, which is separate from proven efficacy.

Q08-25 — D. Assessment for possible skin cancer. Changing pigmented lesions need clinical evaluation, not destructive self-treatment.

Lesson 9: Answers

Q09-01 — D. Pregnancy testing and appropriate assessment. Pregnancy is a critical differential before herbal use.

Q09-02 — C. Endocrine or hormonal modulator. Traditional categories should not be confused with proven indications.

Q09-03 — B. Potential toxicity and pregnancy harm. Pennyroyal has well-recognized toxic potential.

Q09-04 — A. Medications, pregnancy possibility and thyroid symptoms. Reproductive assessment needs medical context.

Q09-05 — D. Do not delay appropriate fertility evaluation. Medical assessment is central to infertility care.

Q09-06 — C. Historical category without assured clinical outcome. Traditional classifications are not evidence of safety or efficacy.

Q09-07 — B. Pregnant or breastfeeding patients. Pregnancy/lactation safety evidence is often limited.

Q09-08 — A. Product-specific evidence and liver safety concerns. Herb effects and safety cannot be assumed across preparations.

Q09-09 — D. Urgent ectopic-pregnancy assessment. Ectopic pregnancy can be life-threatening.

Q09-10 — C. Good trials using the same preparation and relevant outcomes. Product-specific clinical evidence matters.

Q09-11 — B. Pregnancy test. Pregnancy must be considered before discussing menstrual-stimulating interventions.

Q09-12 — C. Vitex agnus-castus. Vitex agnus-castus is chaste tree; indications and interactions need clinical evaluation.

Q09-13 — D. Urgent evaluation and stabilization. Heavy bleeding with hemodynamic symptoms may be an emergency.

Q09-14 — A. Potential effects on uterus and pregnancy; safety often unproven. Many reproductive botanicals have insufficient pregnancy safety data or possible uterotonic effects.

Q09-15 — B. Actaea racemosa. Actaea racemosa is black cohosh; products and liver cautions warrant review.

Q09-16 — C. Check thyroid function and iodine exposure before recommending. Excess iodine can aggravate some thyroid conditions.

Q09-17 — D. Fucus vesiculosus. Fucus vesiculosus is bladderwrack, a seaweed that may supply iodine.

Q09-18 — A. Require product-specific pregnancy safety and indication review. Dietary exposure is not equivalent to concentrated medicinal formulations.

Q09-19 — B. Evaluate pregnancy, medications and possible hyperprolactinemia. Pituitary and medication causes should be evaluated before supplements.

Q09-20 — C. Viburnum opulus. Viburnum opulus is cramp bark in traditional herbal literature.

Q09-21 — D. Investigate postmenopausal bleeding. Postmenopausal bleeding warrants clinical evaluation for endometrial pathology.

Q09-22 — A. It does not prove clinically meaningful progesterone conversion in humans. Biochemical or traditional language should not be mistaken for hormone efficacy.

Q09-23 — B. Review supplements with the fertility team and assess interaction risks. Fertility care requires reconciliation of hormonal and drug exposures.

Q09-24 — C. Reduced contraceptive effectiveness and unintended pregnancy risk. Enzyme induction by St. John's wort can reduce exposure to some hormonal contraceptives.

Q09-25 — D. Urgent evaluation for ectopic pregnancy. Possible ectopic pregnancy is time-sensitive and potentially life threatening.

Lesson 10: Answers

Q10-01 — C. Unsaturated pyrrolizidine alkaloids. Some pyrrolizidine alkaloids can damage hepatic sinusoids.

Q10-02 — B. Malignant arrhythmia and neurological toxicity. Aconitine is highly toxic to cardiac and neural tissues.

Q10-03 — A. Tropane alkaloids. Tropane alkaloids can produce anticholinergic poisoning.

Q10-04 — D. Conium maculatum is poison hemlock. Poison hemlock and water hemlock are distinct plants.

Q10-05 — C. Dysrhythmia. Cardiac glycosides can cause life-threatening rhythm disturbances.

Q10-06 — B. It is classified as a furocoumarin. Gossypol is a polyphenolic compound, not a furocoumarin.

Q10-07 — A. Emergency or poison-centre consultation. Poisoning management requires expert urgent care.

Q10-08 — D. Cyanogenic glycosides. Certain cyanogenic glycosides can generate cyanide.

Q10-09 — C. Delirium, mydriasis and tachycardia. Tropane alkaloid intoxication can produce anticholinergic toxidrome.

Q10-10 — B. “Water hemlock” as the common name for Conium. Cicuta species are water hemlock; Conium is poison hemlock.

Q10-11 — B. Hepatic injury including sinusoidal obstruction syndrome. Unsaturated pyrrolizidine alkaloids can injure hepatic sinusoids and cause severe liver disease.

Q10-12 — C. Aconitum napellus. Monkshood contains highly toxic aconitine-type alkaloids that can cause fatal arrhythmias.

Q10-13 — D. Emergency toxicology and advanced cardiac care. Aconitine poisoning is potentially rapidly fatal and requires emergency management.

Q10-14 — A. Atropa belladonna. Atropa belladonna contains tropane alkaloids; poisoning may cause anticholinergic syndrome.

Q10-15 — B. Anticholinergic poisoning. Tropane alkaloid exposure can produce anticholinergic toxicity.

Q10-16 — C. Convallaria majalis. Convallaria majalis contains cardenolides and may produce dangerous dysrhythmias.

Q10-17 — D. Conium maculatum. Poison hemlock (Conium maculatum) contains neurotoxic piperidine alkaloids.

Q10-18 — A. Salicylate poisoning. Methyl salicylate-rich wintergreen oil can cause severe salicylate poisoning.

Q10-19 — B. Potential cyanide release from cyanogenic glycosides. Amygdalin can release cyanide, impairing cellular respiration.

Q10-20 — C. Inhibition of sodium-potassium ATPase by cardiac glycosides. Digitalis glycosides alter cellular ion handling and may cause serious arrhythmia.

Q10-21 — D. Caustic tissue destruction can delay cancer diagnosis and treatment. Unapproved escharotics can injure tissue and delay evidence-based cancer care.

Q10-22 — A. Podophyllum peltatum. Podophyllum contains highly potent compounds and is unsafe for unsupervised oral use.

Q10-23 — B. Mycotoxins. Contamination may introduce fungal toxins and necessitate batch rejection.

Q10-24 — C. Jaundice, dark urine and right-upper-quadrant pain. Jaundice or dark urine after a new product warrants prompt evaluation.

Q10-25 — D. Activate emergency services and poison-centre assessment. Seizures after possible poisoning require urgent emergency care.

Lesson 11: Answers

Q11-01 — B. Metabolic/transporter induction. St. John's wort induces CYP/P-gp pathways.

Q11-02 — A. St. John's wort with hormonal contraception. Enzyme induction can reduce hormonal contraceptive exposure.

Q11-03 — D. Serotonergic toxicity. Overlapping serotonergic effects may be dangerous.

Q11-04 — C. Metformin. A study reported a reduction in metformin exposure with goldenseal.

Q11-05 — B. Hypokalemia and hypertension. Licorice can affect potassium and blood pressure.

Q11-06 — A. Kava. Kava products have been linked with serious liver adverse events.

Q11-07 — D. Bleeding risk and medication interactions. Bleeding consequences and metabolism changes matter.

Q11-08 — C. Review all products and consult prescriber/pharmacist. Document and coordinate safe medication changes.

Q11-09 — B. Person with liver disease taking multiple prescriptions. Comorbidities and polypharmacy increase potential risk.

Q11-10 — A. Drug, botanical species, dose and start/stop dates. Precise exposures help identify interactions.

Q11-11 — B. Induction of metabolic enzymes and transporters. Hypericum constituents can induce CYP3A4 and P-glycoprotein, reducing exposure to some drugs.

Q11-12 — C. Review ingredients and interaction evidence; coordinate INR monitoring when indicated. Narrow-therapeutic-index drugs require careful interaction assessment.

Q11-13 — D. Hypokalemia can increase susceptibility to digoxin toxicity. Hypokalemia potentiates digitalis-related rhythm problems.

Q11-14 — A. Opioids, benzodiazepines and alcohol use. Combined CNS depressants can increase impairment and respiratory risk.

Q11-15 — B. Avoid unsupervised use because of possible liver injury. Kava safety concerns include liver injury, particularly relevant to existing liver disease.

Q11-16 — C. Low serum potassium. Glycyrrhizin can cause pseudoaldosteronism and potassium wasting.

Q11-17 — D. Hypoglycemia symptoms and glucose readings. Additive hypoglycemic effects may occur with prescribed agents.

Q11-18 — A. Bleeding, sedation, blood pressure and drug-interaction risks can affect perioperative care. Preoperative teams need a complete exposure list and individualized stop/restart plans.

Q11-19 — B. Reduced tacrolimus levels and rejection risk. Enzyme induction can lower immunosuppressive drug exposure.

Q11-20 — C. Avoid dispensing until each ingredient is verified. Unknown identities prevent meaningful toxicity and interaction screening.

Q11-21 — D. Bleeding severity, medication exposures and interaction potential. Anticoagulant bleeding requires clinical review; evidence for specific herbal interactions varies.

Q11-22 — A. Encourage disclosure because supplements can alter treatment safety. Open disclosure facilitates safe drug reconciliation.

Q11-23 — B. Pregnant patients. Pregnancy requires special scrutiny for developmental and uterotonic risks.

Q11-24 — C. Accumulation, electrolyte effects and contamination. Renal impairment changes risks from some compounds and fluids.

Q11-25 — D. Document, manage, and report through the appropriate Health Canada pathway. Pharmacovigilance and appropriate reporting support safety monitoring.

Lesson 12: Answers

Q12-01 — A. A licensed natural health product for labelled conditions of use. Health Canada authorization applies to the reviewed product and label.

Q12-02 — D. Appropriate controlled clinical studies with relevant outcomes. Trial design and clinically meaningful outcomes matter.

Q12-03 — C. Constituents, dose and exposure may differ. Preparation-specific evidence cannot be freely generalized.

Q12-04 — B. Benefits, uncertainty, alternatives, risks and monitoring. Patients need balanced options and safeguards.

Q12-05 — A. Clinical assessment, documentation and reporting as applicable. Adverse-event documentation supports pharmacovigilance.

Q12-06 — D. NPN does not prove the advertised cancer cure. An NPN is not a blanket endorsement of unrelated claims.

Q12-07 — C. A prespecified patient-relevant function or symptom score. Measure results that matter to patients.

Q12-08 — B. Controlled evidence of benefit and harm is required for efficacy claims. Traditional history is distinct from efficacy research.

Q12-09 — A. It states licensed use, ingredients, dose and cautions. Product-specific conditions of use matter.

Q12-10 — D. Set follow-up, stopping rules and safety reporting plan. Ongoing review supports effectiveness and safety.

Q12-11 — B. Health Canada product authorization for specified conditions of use. Licensing applies to the product's approved conditions of use and labelled risks.

Q12-12 — C. Health Canada's Licensed Natural Health Products Database. The public database lists product identity, licence status, ingredients, uses and risk information.

Q12-13 — D. Clinical effectiveness in humans remains unproven without appropriate studies. In-vitro activity alone does not establish patient benefit.

Q12-14 — A. Magnitude and patient relevance of the effect, not only a P value. Statistical significance may not equate to clinical importance.

Q12-15 — B. Evaluate for pyelonephritis and indicated antimicrobial care. Systemic signs with urinary symptoms suggest upper tract infection.

Q12-16 — C. Urgent assessment for infected obstruction. Infected urinary obstruction is a medical emergency requiring timely source control.

Q12-17 — D. Use evidence-based hepatology care; discuss herbal products only as possible adjuncts with safety review. Antiviral efficacy and hepatic safety must be established; herbs should not displace indicated therapy.

Q12-18 — A. Confounding and spontaneous recovery cannot be ruled out. Uncontrolled observations cannot reliably estimate causal effectiveness.

Q12-19 — B. Well-designed randomized controlled trial. Randomization and appropriate controls reduce important biases.

Q12-20 — C. Validated sleep and daytime-function measures plus adverse effects. Patient-relevant outcomes, harms and function should guide evaluation.

Q12-21 — D. Case-based and stand-alone application of entry-level competence. The guide emphasizes clinical readiness and critical thinking.

Q12-22 — A. No; modalities include multiple therapeutic areas. The modalities domain spans botanical, nutrition, TCM, homeopathy and other areas; no botanical-only weight is stated.

Q12-23 — B. Do not assume continued lawful authorization; verify current status before sale/use. Current licence status and labelled conditions matter.

Q12-24 — C. Set measurable goals, adverse-event checks and clear stopping criteria. Structured reassessment prevents ineffective or unsafe prolonged use.

Q12-25 — D. Identify red flags, differential diagnosis, medication interactions, evidence and disposition. Exam-ready answers integrate safety and diagnostic assessment with appropriate treatment reasoning.

References and scope

• March 2026 Ontario Clinical Sciences Examination Reference Guide supplied by the user (competencies, botanical-name list and exam question approach).

• User-supplied botanical lecture notes, Action Definitions and Examples 2018 workbook, BOT 202 question bank, BOT 302/303 assignments and cases.

• Health Canada Licensed Natural Health Products Database: https://produits-sante.canada.ca/lnhpd-bdpsnh/

• NCCIH Herbs at a Glance: https://www.nccih.nih.gov/health/herbsataglance

Educational safety note: Clinical and regulatory content may change. Do not use this workbook for direct patient prescribing. Student content should undergo editorial and clinical review before release.