Occupational Outline for:
Discipline C Challenge – **Phlebotomy**

Category I – Phlebotomy Basics (Overview)

Sub-Cat 1 – Phlebotomy Practice and Settings

a. - definition, function, & purpose of phlebotomy
b. - professional, ethics, behavior, appearance, & teamwork
c. - communication with/during telephone, bedside, home, ambulatory, interview, and
training of patients
d. - verbal./non-verbal and positive/negative communication
e. - posture, grooming, hygiene, and personal health
f. - clothing and protective equipment
g. - patient's rights, family, friends, and issues
h. - hospital, ambulatory, home health care, and the clinical laboratory's role

Sub-Cat 2 – Anatomy and Physiology

a. - structural organization
b. - organ system's names and functions with major emphasis on cardiovascular system;
heart and arteries, veins, capillaries

Sub-Cat 3 – Composition/Function of Blood

a. - plasma/serum
b. - cellular elements; RBC,WBC, platelets, hemoglobin

Sub-Cat 4 – Terminology

a. - basic word roots, prefixes, and suffixes
b. - laboratory tests names
c. - medical and lab abbreviations
d. - use of medical terms in documentation

Category II – Safety Procedures

Sub-Cat 1 – Infection Control

a. - chain of infection; source, mode of transmission, susceptibility
b. - OSHA standards and acts
c. - standard precautions; exposure procedures and infection control
d. - isolation techniques; hand washing, gowning, masking, gloving, entering/exiting, and disposal of contaminated items
e. - prevention of laboratory acquired infections
f. - sterile techniques; disinfectants and antiseptics

Sub-Cat 2 – Safety and First Aid

a. - safety in specimen handling
b. - exposure control
c. - personal hygiene
d. - laboratory safety
e. - fire safety
f. - electrical safety
g. - radiation safety
h. - chemical safety
i. - patient safety
j. - disaster emergency plan
k. - emergency procedures; bleeding aid, breathing aid, circulation aid, shock treatment
l. - know the use of material safety data sheets

Sub-Cat 3 – Specimen Documentation/Transportation

a. - fundamentals of documentation
b. - laboratory communication; policies and procedures, network for lab testing, telephone, confidentiality, faxes, computer communication, bar codes
c. - transmittal of test requests; Electronic Medical Record (EMR) & Laboratory Information System (LIS)
d. - specimen labeling and blood collection lists
e. - handle blood samples to maintain specimen integrity, chilled specimens, protection from light, warmed specimens, microbiological specimens, and delivery methods
f. - label transfusion services specimens according to proper protocol
g. - reporting mechanisms

Category III – Equipment and Procedures

Sub-Cat 1 – Blood Collection Equipment

a. - vacuum tube systems – evacuated
b. - anticoagulants and separation gels in blood collection tubes; gray topped, green-topped, speckled-topped, etc.
c. - safety syringes
d. - needles; butterfly and needle disposal
e. - tourniquet options
f. - bleeding time equipment
g. - glove options; latex free options
h. - antiseptic, sterile gauze pads, and bandages
i. - microcollection equipment
j. - lancets and tubes
k. - blood drawing chair
l. - infant phlebotomy station
m. - collection trays

Sub-Cat 2 – Venipuncture Procedures

a. - protocols for assessing, identifying, and approaching the patient
b. - equipment selection, site selection, and patient preparation
c. - venipuncture methods; evacuated tube, syringe, butterfly method, bandaging, disposal of wastes+, proper tube-draw sequence, specimen labeling, provide post care to puncture site, assess patient status before departure
d. - specimen rejection
e. - prioritizing patients
f. – potential adverse outcomes

Sub-Cat 3 – Skin Puncture Procedures

a. - basic technique for skin puncture
b. - preparation
c. - supplies
d. - skin puncture sites
e. - skin puncture procedure; warming, cleaning, lancet disposal, and labeling
f. – potential adverse outcomes

Sub-Cat 4 – Blood Collection Complications and Corrective Actions

a. - refer problems to supervisor appropriately
b. - complications associated with blood collection; syncope, fainting, failure to draw blood, hematomas, petechiae, excessive bleeding, neurologic, mastectomy, edema, obesity, intravenous therapy, damaged veins, hemoconcentration, hemolysis, collapsed veins, allergies, thrombosis, burned or scarred area, infections, nausea, and vomiting
c.- effects of physical disposition on collection; basal state, diet, exercise, stress, diurnal rhythms & posture, age, and tourniquet pressure & fist pumping
d. - interference of drugs and other substances in the blood
e. - specimen rejection

Category IV – Point of Care Testing and Special Procedures

Sub-Cat 1 – Pediatric Collection

a. - age specific care
b. - preparing the child and parent
c. - prevention of disease transmission
d. - pediatric phlebotomy procedures; microcapillary skin puncture, heel punctures, neonatal screening, finger stick, venipuncture, and collecting from IV lines

Sub-Cat 2 – Elderly, Home, and Long Care Collections

a. - age specific care
b. - glucose monitoring
c. - blood gas and electrolyte analysis
d. - POCT for acute heart damage
e. - blood coagulation monitoring; home testing
f. - hematocrit, hemoglobin, and hematology parameters
g. - cholesterol screening

Sub-Cat 3 – Arterial, Intravenous (IV), and Special Collections

a. - arterial blood gases
b. - capillary blood gases
c. - bleeding-time test
d. - glucose tolerance test
e. - postprandial glucose test
f. - lactose tolerance test
g. - therapeutic drug monitoring
h. - trace metals collection
i. - genetic molecular test
j. - IV line collections and interfering factors
k. - cannulas and fistulas
l. - donor room collection
m. - therapeutic phlebotomy
n. - autologous transfusion
o. - emergency center collection

Sub-Cat 4 – Urinalysis and Body Fluid Collections

a. - handle non-blood specimens to maintain their integrity
b. - urine collection; 24 hour collection & storage, pregnancy test, timed collection, and tolerance test
c. - cerebrospinal fluid; other body fluids
d. - fecal specimens
e. - seminal fluid
f. - amniotic fluid
g. - culture specimens
h. - throat and nasopharyngeal collection
i. - skin tests
j. - Hollander test
k. - breath analysis for peptic ulcer
l. - sweat chloride by ionophoresis

Sub-Cat 5 – Forensic, Toxicology, Workplace Testing, Sport Medicine, and Other Collections

a. - forensic toxicology specimens
b. - chain of custody specimens
c. - preferred specimens for drug testing; urine for drug testing and collecting specimens for alcohol
d. - neonatal drug testing
e. - specimen tampering

Category V – Quality Management and Legal/Regulatory Issues

Sub-Cat 1 – Quality, Competency, and Performance Assessment

a. - tools and processes for competency and performance assessment
b. - CQI for specimen collection
c. - collection procedures to ensure quality
d. - number of blood collection attempts
e. - QC and preventive maintenance
f. - reliability and accuracy in laboratory testing (CAP, AABB, CLIA)

Sub-Cat 2 – Ethical, Legal, and Regulatory Issues

a. - ethics
b. - confidentiality and HIV exposure
c. - chain of custody
d. - know principles of liability regarding phlebotomy
e. - battery
f. - malpractice
g. - standard of care
h. - informed consent
i. - medical records
j. - malpractice insurance
k. - guarantees under the AHA Patient Bill of Rights
l. - regulatory agencies; OSHA,CLSI, and CDC
m. - Clinical Laboratory Improvement Amendments (CLIA)
n. - Health Insurance Portability and Accountability Act (HIPAA)

Question Development Instructions and Form

The ***CEC*** system's challenge tests use several question banks that have a variety of four answer multiple-choice questions. Each question in the bank has a stem, the main idea, with three plausible distracters and the correct answer. There are also four intellectual types of questions. These different types are: memory, interpretation, application, and evaluation

The preceding occupational outline for **Phlebotomy** provides an essential breakdown of discipline C. It is laid out in categories, sub-categories, and competencies. Each question developed needs to be marked with the discipline's letter. The category's Roman numeral and the sub-category's number. (It is **not** important or necessary to assign your questions down to the competency level.)

Each of your questions also needs to be labeled with a difficulty level. The four levels are: *Simple, Average, Difficult, and Extremely Difficult.* If the question covers a topic that you believe virtually everyone in the field knows or should know, mark it as *Simple.* If the topic is widely known by a simple majority of the people using or studying in this area, it can be marked as *Average.* If you believe the topic is known by less than 1/3rd of the people working in this area, mark the question as *Difficult.* If the topic is specialized or is simply known by someone who is an expert in the field, mark the question as *Extremely Difficult.*

It is important that our challenge tests measure an accurate sampling of our contestants' skills and knowledge in the discipline. Therefore, questions cannot be someone's opinion, belief, or supposition. It is important that all questions are able to be validated from at least one credible source. You will be asked to give the source material for each question submitted. Example:

Discipline: _C_ Category: __I__ Sub-Cat: _3_ Difficulty: _*Average*_

Stem: _The role of all anticoagulants is ultimately to prevent formation of_
Correct Answer: _Fibrin_____
Distracter 1: __Factor VII_____
Distracter 2: __Platelets_____
Distracter 3: __Collagen_____

Source Name: __NCCT Review Book_____ Edition/Copyright: _2004_
Page/s: _20_

Comments: _____

Submitting Institution _ABC School_ Author of (**?)'s** Last Name __Smith_____

Question Development Form

Discipline: ___ Category: ____ Sub-Cat: ___ Difficulty: _________

Stem: ____.__
Correct Answer: ____
Distracter 1: ____
Distracter 2: ____
Distracter 3: ____

Source Name: _______________________ Edition/Copyright: ______ Page/s: _____

Comments: ____

Submitting Institution ______________ Author of (**?**)**’s** Last Name ________________

Discipline: ___ Category: ____ Sub-Cat: ___ Difficulty: _________

Stem: ____.__
Correct Answer: ____
Distracter 1: ____
Distracter 2: ____
Distracter 3: ____

Source Name: _______________________ Edition/Copyright: ______ Page/s: _____

Comments: ____

Submitting Institution ______________ Author of (**?**)**’s** Last Name ________________

Discipline: ___ Category: ____ Sub-Cat: ___ Difficulty: _________

Stem: ____.__
Correct Answer: ____
Distracter 1: ____
Distracter 2: ____
Distracter 3: ____

Source Name: _______________________ Edition/Copyright: ______ Page/s: _____

Comments: ____

Submitting Institution ______________ Author of (**?**)**’s** Last Name _________________