

**MEDICAL TECHNOLOGY LICENSURE EXAM TOPIC CHECKLIST
(BASED ON TABLE OF SPECIFICATIONS SET BY PRC)**

| CLINICAL CHEMISTRY | | Done? | Again? | Last? |
|--|--|-------|--------|-------|
| Specimen collection | | | | |
| Instrumentation (Principles, Methods, Calibration, Others) | | | | |
| Reagent preparation and laboratory mathematics | | | | |
| Quality assurance | | | | |
| Metabolic Blood Tests (Principles, Procedures, Diseases/Disorders, Reference values) | | | | |
| Water balance and electrolytes | | | | |
| NPN and other metabolic intermediaries and inorganic ions | | | | |
| Carbohydrates | | | | |
| Lipids and dysproteinemia | | | | |
| Specific proteins | | | | |
| Liver function tests | | | | |
| Clinical enzymology | | | | |
| Endocrinology and Toxicology (Principles, Procedures Diseases/Disorders) | | | | |
| Thyroid Hormones | | | | |
| Sex Hormones | | | | |
| Other Hormones (Pituitary, Adrenal) | | | | |
| Substance of Abuse | | | | |
| Other poisons/toxic agents (Alcohol, Carbon monoxide, Mercury, Lead, Arsenic) | | | | |
| TDM - Anticonvulsants and other drugs | | | | |
| Blood gas analysis and other tests (Principles, Procedures, Diseases/Disorders, Reference values) | | | | |
| Laboratory safety | | | | |
| MICROBIOLOGY & PARASITOLOGY | | Done? | Again? | Last? |
| Bacteriology | | | | |
| Collection, transport, processing and staining of specimens | | | | |
| Culture media | | | | |
| Bacteria (Aerobes) | | | | |
| Morphology and staining characteristics | | | | |
| Cultural characteristics | | | | |
| Work-up for identification: biochemical, differential and confirmatory tests | | | | |
| Serologic/molecular tests | | | | |
| Susceptibility tests | | | | |
| Bacteriologic examination of water, food, milk, and utensils | | | | |
| Bacteria (Anaerobes) | | | | |
| Mycobacteria | | | | |
| Other bacteria with unusual growth requirements (Spirochetes, Chlamydia, Mycoplasma, Rickettsia) | | | | |
| Mycology | | | | |
| Collection, transport and examination of clinical specimens | | | | |
| Culture | | | | |
| Virology | | | | |
| General characteristics, transmission and diseases | | | | |
| Collection, transport and examination of clinical specimens | | | | |
| Equipment and instrumentation | | | | |
| Manual | | | | |
| Automated | | | | |
| Quality assurance and safety | | | | |
| Collection of specimen | | | | |
| Quality control | | | | |
| Safety - patient/staff | | | | |
| Safety - workplace/environment | | | | |
| Parasitology | | | | |
| Parasites - life cycle, morphological characteristics, epidemiology, prevention and control, manner of reporting, counting | | | | |
| Nematodes | | | | |
| Trematodes | | | | |
| Cestodes | | | | |
| Protozoa | | | | |
| Ectoparasites | | | | |
| Parasitologic Techniques | | | | |
| Routine | | | | |
| Concentration | | | | |

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|--|--------------|---------------|--------------|
| Others | | | |
| Quality assurance | | | |
| Collection and preservation of specimen | | | |
| Quality control | | | |
| CLINICAL MICROSCOPY | Done? | Again? | Last? |
| Urine | | | |
| 1.1.Anatomy and physiology of the kidney | | | |
| Formation of urine | | | |
| 1.2.Macroscopic examination | | | |
| 1.3.Chemical analyses | | | |
| 1.4.Microscopic examination | | | |
| 1.5.Pregnancy testing | | | |
| 1.6.Renal calculi | | | |
| Feces | | | |
| Other Body Fluids | | | |
| 3.1. CSF | | | |
| 3.2. Seminal Fluid | | | |
| 3.3. Amniotic Fluid | | | |
| 3.4. Gastric Fluid and Duodenal Content | | | |
| 3.5. Sputum and Bronchial Washings | | | |
| 3.6. Synovial Fluid | | | |
| 3.7. Peritoneal, Pleural, and Pericardial Fluids | | | |
| Collection, preservation and handling of specimens | | | |
| Microscope, automation, other instruments | | | |
| Quality assurance and laboratory safety | | | |
| HEMATOLOGY | Done? | Again? | Last? |
| Blood collection, anticoagulants and others (including Safety) | | | |
| Hematology tests and procedures | | | |
| 2.1. Routine | | | |
| 2.2. Automation | | | |
| 2.3. Special | | | |
| Hematopoiesis, Diseases/Disorders and Reference values | | | |
| 3.1. Hematopoiesis (in general) | | | |
| 3.2. Erythropoiesis and RBCs | | | |
| 3.3. Leukopoiesis and WBCs | | | |
| 3.4. Thrombopoiesis and Platelets | | | |
| Coagulation (Principles, Procedures, Diseases/Disorders and Reference values) | | | |
| 4.1. Hemostasis - Theories/Concepts, Mechanisms | | | |
| 4.2. Coagulation procedures/tests | | | |
| 4.3. Coagulation factors, diseases/disorders & reference values | | | |
| Quality assurance | | | |
| IMMUNOLOGY, SEROLOGY & BLOOD BANKING | Done? | Again? | Last? |
| Historical background | | | |
| Natural (innate) immunity, including role of macrophages, monocytes and granulocytes | | | |
| Acquired immunity - humoral responses, immunogens, immunoglobulins, B cells | | | |
| Acquired immunity - cellular responses, T cells, cytokines and chemokines | | | |
| Complement System | | | |
| MHC, HLA and Transplantation | | | |
| Immunologic tests for detection of antigens & antibodies - principles, procedures, interpretation of results | | | |
| 20.1. Bacterial infections and STD | | | |
| 20.2. Viral infections, including Hepatitis and HIV | | | |
| 20.3. Fungal infections | | | |
| 20.4. Parasitic infections, including malaria | | | |
| 20.5. Autoimmune disorders | | | |
| Tumor immunology (Tumor markers, Oncoproteins) | | | |
| Hypersensitivity | | | |
| Instrumentation and quality management | | | |
| ABO and Rh Blood Group Systems | | | |
| Other Major Blood Group Systems: Kell, Duffy, Kidd, Lewis, MNSs, Lutheran, P, I | | | |
| Minor Blood Group Systems: Diego, Cartwright, Chido, XG, Scianna, Gerbich, Milton, Knops, Bg, Indian, etc | | | |
| Basic Genetics | | | |
| Blood donor selection and processing | | | |
| Blood preservation and banking | | | |

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| Component preparation | | | |
| Transfusion therapy | | | |
| Transfusion reactions | | | |
| Transfusion-transmitted diseases | | | |
| BB techniques and procedures: typing, compatibility testing, antibody detection and identification | | | |
| Hemolytic Disease of the Newborn (HDN) and Auto-immune Hemolytic Anemia | | | |
| Quality management (structure, set-up/ equipment, Laboratory Information System/LIS) | | | |
| HISTOTECHNIQUES & MEDTECH LAWS | Done? | Again? | Last? |
| Histology and Pathology | | | |
| 1.1.Terminologies | | | |
| 1.2.Etiology of disease | | | |
| 1.3.Signs, symptoms and course of disease | | | |
| 1.4.Cellular and tissue changes | | | |
| Histopathologic techniques and procedures | | | |
| 2.1. Preservation and handling of specimen | | | |
| 2.2. Tissue processing and procedures | | | |
| 2.2.1. Routine - Manual | | | |
| 2.2.2 Routine - Automation | | | |
| 2.2.3. Special - Frozen section, Microwave | | | |
| 2.3. Staining | | | |
| 2.3.1. Routine | | | |
| 2.3.2. Special (Immunohistochemistry) | | | |
| Cytological techniques and procedures | | | |
| 3.1. Preservation and handling of specimen | | | |
| 3.2. Processing | | | |
| 3.2.1. Manual | | | |
| 3.2.2. Automation | | | |
| 3.3. Staining | | | |
| Autopsy | | | |
| 4.1. Terminologies | | | |
| 4.2. Handling, processing and documentation | | | |
| Quality assurance | | | |
| MT Laws | | | |
| Laboratory Management | | | |
| Related Laws | | | |
| Code of Ethics including Bioethics | | | |

i can do all things through christ who strengthens me

(Phil 4:13)