MEDLAB BASICS · STUDY SHEET

ASCP MLT Exam Guide

The Medical Laboratory Technician exam: format, content areas, what MLT leaves out, routes, a 6-week study plan, and moving up to MLS

11 sources + more detail
medlabbasics.com/sheets/guide-ascp-mlt.html
checked Nov 2026

1 The exam at a glance

FEATURE	DETAIL
Items	100 multiple choice, four options, one best answer; every candidate answers all 100
Time	2 hours 30 minutes
Format	Computer adaptive (CAT) at Pearson test centers; content areas are mixed, not in blocks
Navigation	Answer each question to move on; no skipping. Flag questions and review or change answers at the end if time remains
Scoring	Scaled score 100 to 999; 400 passes. Based on the pattern of answers, not a percent correct
Unscored items	Field-test questions are mixed in and look the same; ASCP does not publish how many
Calculator	On screen
Results	Preliminary pass or fail on screen; score report within 4 business days
Fee	$235, non-refundable (MLT(ASCP) and MLT(ASCPi))
Retakes	Up to 5 attempts per eligibility route; new application and fee each time; at least 30 days apart
2025 pass rate	71% overall (3,135 exams); 78% first time; 40% repeat

How the CAT works: the first question sits near the passing standard. A correct answer brings a slightly harder question and a miss a slightly easier one, always within the content-area percentages. Expect about half the questions to feel hard; that is the design, not a sign of failing.

2 What is on it

ASCP BOC MLT and MLS content guidelines, revised June 9, 2026. App mock: questions per 100-item form, from each range's midpoint.

CONTENT AREA	MLT RANGE	APP MOCK	MLS RANGE
Blood Banking	15 to 20%	17	17 to 22%
Urinalysis and Other Body Fluids	5 to 10%	8	5 to 10%
Chemistry	20 to 25%	22	17 to 22%
Hematology (includes hemostasis)	20 to 25%	22	17 to 22%
Immunology	5 to 10%	7	5 to 10%
Microbiology	15 to 20%	17	17 to 22%
Laboratory Operations	5 to 10%	7	5 to 10%

EXAM TIP Chemistry and hematology together are 40 to 50% of the MLT exam, more than on MLS. Blood banking and microbiology weigh a little less.

Questions are theoretical (apply knowledge, calculate, correlate results with disease) or procedural (perform techniques, follow quality assurance). Regulatory questions use U.S. sources such as AABB, FDA and CLIA; donor eligibility follows the rules as of June 2026. MLT(ASCPi) candidates use the same content guideline.

3 What MLT leaves out compared with MLS

AREA	IN THE MLS OUTLINE BUT NOT THE MLT OUTLINE
Blood Banking	HLA antigens; neutralization and inhibition as a special test
Chemistry	Porphyrins
Hematology	HPLC for hemoglobin (electrophoresis and sickle solubility stay)
Hemostasis	Inhibitors as a disease state; inhibitor, factor and von Willebrand assays; platelet aggregation; thromboelastography; direct thrombin inhibitors; heparin neutralization; lupus anticoagulant and HIT studies
Immunology	Stages of Treponema pallidum and Borrelia burgdorferi infection; TB testing (IGRA, PPD); cytokine testing
Microbiology	Interpretation of special stains; virulence mechanisms (except GI); H. pylori detection; 16S sequencing; antibiotic mechanisms of action; mycobacterial identification methods, molecular detection, therapy and pathogenicity; fungal colony morphology and growth characteristics, and direct and molecular detection of fungi (MLT names yeast identification instead)
Laboratory Operations	Chromatography; basic management principles; education principles

EXAM TIP MLT hemostasis testing is PT/INR, APTT, fibrinogen, D-dimer, thrombin time, mixing studies, PFA, protein C and S, factor V Leiden and prothrombin 20210, and anti-Xa. Know these well; skip the rest of the coagulation page's assay detail.

Everything else is shared: blood products, blood group systems, antibody identification, urinalysis and body fluids, all chemistry analytes, red and white cell disorders, the viral serology and syphilis tests, bacteriology, safety, lab math and instrumentation. The in-depth section lists the microbiology changes in full.

4 Ranges and calculations to learn

ASCP publishes composite reference ranges for chemistry, blood gases, hematology, CSF, semen and urine. They are not shown during the exam; other ranges are given when needed. Results appear in both conventional and SI units. Learn them from the Reference Ranges the Exam Uses page. The MLT table lists only semen volume (2 to 5 mL) and sperm concentration (over 20 x 10^6/mL, or over 20 x 10^9/L); the other semen values are MLS only.

- Percent transferrin saturation, UIBC and TIBC
- Unconjugated (indirect) bilirubin
- LDL by the Friedewald equation, and non-HDL cholesterol
- A/G ratio
- Timed urine calculations and creatinine clearance
- Beer's law
- WBC corrected for more than 10 nRBCs
- Manual hemocytometer counts
- Red cell indices (MCV, MCH, MCHC)
- Absolute counts from relative values (WBCs, reticulocytes)

EXAM TIP The calculation list is the same for MLT and MLS. Work each by hand, then check your answers with calculators such as Red Cell Indices, WBC Corrected for Nucleated RBCs, Manual Cell Count (Hemocytometer), LDL Cholesterol (Friedewald) and Non-HDL, Measured Creatinine Clearance (Timed Urine) and Beer's Law.

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5 Who can take it

ROUTE	REQUIREMENTS FOR MLT(ASCP)
Route 1	Associate degree or 60 semester hours (90 quarter hours) of college credit, plus a NAACLS- or ABHES-accredited MLT program finished within the last 5 years
Route 2	Discontinued January 1, 2023
Route 3	Associate degree or 60 semester hours with 6 semester hours of chemistry and 6 of biology, plus a 50-week U.S. military medical laboratory course within the last 10 years
Route 4	Associate degree or 60 semester hours with 6 of chemistry and 6 of biology, plus 3 years of full-time clinical experience in all six areas, in an acceptable laboratory, within the last 6 years

Students in an accredited program should apply no more than 6 weeks before finishing it. The exam must be taken within the eligibility period on the admission notice; periods are not extended.

6 How to study: 6 weeks

1. Week 1: take a timed 100-question app Mock Exam as a baseline. Read the MLT content guideline and the Reference Ranges the Exam Uses page, then start Daily Review.
2. Week 2: hematology, with the Red Cell Morphology and the Anemias, CBC, Analyzers and Spurious Results, White Cells, Leukemia and Lymphoma, and Hemostasis and Coagulation Testing pages. Practice with the Red Cell Indices, Reticulocyte Count, WBC Corrected for Nucleated RBCs, Manual Cell Count (Hemocytometer) and Absolute Neutrophil Count (ANC) calculators.
3. Week 3: chemistry, with the Clinical Chemistry: Analytes and Disease Patterns; Electrolytes, Acid-Base and Blood Gases; Endocrinology, Drug Monitoring and Toxicology; and Chemistry Methods and Instrumentation pages. Practice with the LDL Cholesterol (Friedewald), Measured Creatinine Clearance, Anion Gap, Serum Osmolality and Beer's Law calculators, and work transferrin saturation and indirect bilirubin by hand.
4. Week 4: blood banking, with the ABO, H and Rh Typing; Antibody Screen and Identification; Compatibility Testing and Blood Components; and Transfusion Reactions and HDFN pages. Work every antigram row by row.
5. Week 5: microbiology (Gram Stain and Bacterial Identification; Specimens, Cultures and Susceptibility Testing; Mycobacteria, Fungi, Parasites and Viruses), then urinalysis and body fluids (Urinalysis; Body Fluids) and immunology (Immunology and Serology), with practice in each content area. Keep the microbiology outline differences in the in-depth section beside you.
6. Week 6: laboratory operations, with the Quality Control, Validation and Regulation; Laboratory Safety and Biosafety; and Laboratory Mathematics pages and practice in that content area, with the Westgard Rules Check, QC Statistics and Solution Dilution calculators. Take two more Mock Exams, then work Missed Questions and your Weakest Subject until test day.

EXAM TIP The app's MLT practice draws on the same bank as MLS, limited to questions its writers judged inside the MLT outline. The mock matches the length, time and topic shares, but it is not adaptive and scores in percent, not on ASCP's scale: use it as practice, not a prediction.

7 Test-day tips

- Pace: 150 minutes for 100 questions is 90 seconds each. Bank time on recall questions for the calculations.
- You cannot skip. Pick your best answer, flag the question, and come back if time remains.
- Every question counts the same to you: field-test items cannot be told apart, so give each full effort.
- Use the on-screen calculator, and write units at every step.
- Results and ranges are shown in both conventional and SI units; use whichever you learned, but check the units before you compare.
- Each question stands alone, with three plausible wrong options. Read the last line of the stem first, then the data.

8 After you pass, and moving up to MLS

- The credential is MLT(ASCP), written MLT(ASCP)CM (CM in superscript) while you take part in the Credential Maintenance Program.
- It is valid for 3 years. Renew with 36 CMP points per cycle: 2 each in blood banking, chemistry, hematology and microbiology, 1 in laboratory or patient safety, 1 in medical ethics, and 26 in your specialty or related areas. CMP fee $110.
- Since January 2026 new credentials come as a Credly digital badge instead of a wall certificate.
- If you fail, the score report breaks your result down by content area. Use it to aim the next round of study.

From ASCP's MLS credential page. The MLS exam has the same format; its outline adds the items in the table above.

MLS ROUTE 2: MLT TO MLS	REQUIREMENT
Certification	Valid MLT(ASCP)
Degree	Bachelor's degree
Science	16 semester hours of biology (including 1 semester of microbiology) and 16 of chemistry (including 1 semester of organic chemistry or biochemistry)
Experience	2 years of full-time clinical experience in an acceptable laboratory within the last 5 years
Fee	$260, the MLS application fee

9 ASCP resources

- MLT credential page (routes and fee): ascp.org/boc, Explore Credentials, MLT
- MLT(ASCP) and MLT(ASCPi) Examination Content Guideline, revised June 9, 2026 (PDF linked from the MLT page)
- About the Examination and After the Examination: ascp.org/boc, Examination Process
- CMP requirements for MLT: ascp.org/boc, Maintain Your Credentials
- ASCP also sells a BOC Study Guide and BOC Interactive Practice Examinations.

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MORE The outline differences in full

A line-by-line comparison of the two June 9, 2026 guidelines. Where an item is not listed here, it appears in both outlines in the same words.

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