

Urinalysis Clinical Practicum Objectives – CLS 639

The following objectives are to be completed by the student for successful completion of this clinical rotation. The objectives within the psychomotor domain will be achieved by practice and evaluated through demonstration by the student. The objectives within the cognitive domain will be obtained through readings and evaluated through written exams.

The Student Is Expected To:

1. Explain to a patient the proper method of collecting a midstream urine.
2. Demonstrate ability to correctly log in urine specimens.
3. Perform chemical urinalysis procedures.
4. Identify those situations in which confirmatory tests are required and perform the appropriate test. (Clinitest, Ictotest, and sulfosalicylic acid test for protein, Acetest).
5. For the following tests:

specific gravity	pH
appearance	protein
glucose	ketones
hemoglobin	bilirubin
urobilinogen	Ictotest
Clinitest	SSA
Acetest	

5a – state the principle.

5b – state the normal value.

5c – list 2 conditions that could result in abnormal values.

5d – list causes of false positive and false negative results for each.

6. Describe the changes which occur in urine upon standing.
7. Define the following terms:

oliguria	polyuria
distal and proximal tubule	loop of Henle
osmolality	collecting tubule
renal glycosuria	diuresis
nephron	nocturia
glomerulus	isosthenuria
ketone bodies	
8. Correlate the Clinitest glucose results with the dipstick glucose results.
9. Discuss the reasons that Clinitest is routinely performed on all children under five.
10. Correlate the effect of various substances on urine appearance. These substances include RBC's, WBC's, bile, melanin, porphyrins, myoglobin, amorphous crystals, drugs, and homogentisic acid.
11. Discuss the four main functions of the kidney.
12. Correctly perform the quality control procedures used in the urinalysis department.
13. Define the following:

serotonin	melanin
alkaptonuria	phenylketonuria
myoglobin	Bence Jones Protein

14. Perform maintenance on urinalyses instruments.

15. Identify elements found in urinary sediments from sediment, descriptions, and images:

white blood cells	amorphous phosphates
red blood cells	amorphous urates
glitter cells	calcium oxalate crystals
epithelial cells	uric acid crystals
mucous	triple phosphate crystals
oval fat bodies	tyrosine crystals
fat droplets	leucine crystals
waxy casts	cysteine crystals
hyaline casts	cholesterol crystals
granular casts	sulfa crystals
WBC casts	ammonium biurate crystals
cylindroids or pseudocasts	yeast
sperm	trichomonas

16. Correlate conditions associated with the structures in the above objective.

17. Describe the formation of all cast types.

18. Report UA results as per laboratory protocol.

19. Describe or demonstrate our method for reporting each of the formed elements in the urine.

20. Correlate the clinical picture and the urinary findings in the following diseases:

lupus erythematosus	multiple myeloma
glomerulonephritis	pyelonephritis
diabetes mellitus	Addison's disease
Cushing's syndrome	diabetes insipidus
renal failure	

21. When given a problem/issue in UA, resolve the problem.

22. Perform complete UAs and correlate microscopic with chemistry results.

Clinical Urinalysis Practicum –CLS 639

Performance Tasks Checklist

Note: This checklist contains a number of Urinalysis tests that may not necessarily be performed in the department at your clinical site or may be performed in another department. The CLS student will perform assigned tests that may or may not be included in this list. However, the student is responsible for applying the objectives to each of the tests listed below and any additional assigned by the site. Performing truly independently at all tasks may not be achievable at this stage, but with supervision the student should be able to perform most tasks with minimal oversight.

Please evaluate the student using the following scale:

1. Exceeds Standards (100%): Consistently exceeds entry level expectations. Student demonstrates exceptional initiative and independent functioning. Can perform tasks independently.
2. Above Standards (90%): Consistent in meeting entry-level expectations. Student performance demonstrates initiative and independent functioning. Student may excel in some areas.
3. Meets Standards (80%): Consistent in meeting entry-level expectations. Can perform procedures with supervision.
4. Below Standards (70%): Performance is marginally below entry-level expectations. Student needs to improve to achieve entry-level competencies.
5. Fails to Meet Standards (60%): Performance is significantly below entry-level expectations. Performance is unacceptable. Needs continuous monitoring and supervision.

N/A: Not applicable. No opportunity to evaluate criteria. Please mark “NA” across the rating scale if there has been inadequate opportunity to evaluate an attribute.

Student Name: _____

Clinical Site: _____

Performance Task

	Exceeds Standards (100%)	Above Standards (90%)	Meets Standards (80%)	Below Standards (70%)	Fails to Meet Standards (60%)	N/A
Identification of specimen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specimen acceptability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specimen preparation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance of routine dipstick / automated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance of routine dipstick / manual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance of Clinitest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance of Ictotest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance of Acetest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance of Sulfosal. Protein	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use and care of Refractometer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Microscopically recognize and quantitate leukocytes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Microscopically recognize and quantitate erythrocytes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Microscopically recognize and quantitate epithelial cells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Microscopically recognize and quantitate casts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Microscopically recognize and quantitate crystals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Able to troubleshoot discrepancies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Follow safe work practice (universal precautions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performs QC procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognizes critical values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turnaround time protocol – can perform UA within the labs turnaround time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review of results for accuracy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognizes abnormal and absurd results and takes appropriate action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keeps work area clean, organized, and stocked with supplies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Correlates microscopic with chemical analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other skills not specifically listed above related to the analysis of urine

Other skill: _____

- Exceeds Standards (100%)
- Above Standards (90%)
- Meets Standards (80%)
- Below Standards (70%)
- Fails to Meet Standards (60%)
- N/A

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- Below Standards (70%)
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- N/A

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Other skill: _____

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- Below Standards (70%)
- Fails to Meet Standards (60%)
- N/A

Other skill: _____

- Exceeds Standards (100%)
- Above Standards (90%)
- Meets Standards (80%)
- Below Standards (70%)

- Fails to Meet Standards (60%)
- N/A

Additional Comments:

Clinical Instructor: _____

Date: _____