



SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY
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(An Institute of National Importance under Govt. of India)

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P&A.I/X/68/Syllabus/VOP/SCTIMST/2009

Dated: 28.10.2009

NOTICE

The syllabus for written test for selection to the post of **Scientific Assistant (Lab)-for CCL**, as approved by the Director is notified for the information of all concerned.

1. Principles of spectrophotometry: Beer's law, definition of molar absorption coefficient.
2. Fundamentals of enzymatic reactions; methods in diagnostic enzymology; chromogenic substrates; liver and kidney function parameters.
3. Acid-base balance in the body; major serum electrolytes and function; correlation of electrolyte levels with diseases; normal levels of major blood gases and their variations in diseases and following surgery; principles of detection of blood gases, pH and electrolytes in blood gas analyzer.
4. Definitions of pH and principles of buffers. Definitions of molarity, molar solutions, normality and percentage solutions. Dilution from one molarity to another; conversion of percentage concentration to molarity.
5. Normal blood counts of RBC and WBC; percentage of differential WBCs; porrelation of WBC level to disease state; principles of differential counting of WBCs in automated 5 part counters.
6. Blood coagulation factors; coagulation parameters usually measured and general principles of assessing these parameters.
7. Immunoglobulin types in serum, their structural and functional differences; principles of application of antigen-antibody reactions in enzyme immunoassays, immunohistochemistry and immunoturbidimetry.
8. Definitions of specificity and sensitivity of diagnostic assays; precautions in blood/serum collection and storage; significance of quality control and its implementation.

ADMINISTRATIVE OFFICER GR-1