



MLT (Technologist)-Syllabus

Theory-1^{1/2} hrs

Practical-4 hrs

Week No.	Theory	Practical
1	Intro. To Medical Tech.	Intro. To Q.C
Day 1	Introduction – Pathology	
Day 2	Responsibilities of Lab. technician	
Day 3	Lab Safety & Practical Precaution	
Day 4	Lab. Structure & Reception Collection	
Day 5	& Procedure Computer & signing authority room	
2	Method Of Blood Collection	Blood Collection
Day 1	Capillary Puncture	
Day 2	Types of syringe, needle	
Day 3	Vein Puncture	
Day 4	Intro To Artery Puncture	
Day 5	Artery puncture	
3	Study Of Anti-Coagulation	Blood Collection
Day 1	Coagulation mechanism	
Day 2	EDTA, Double Oxalate Bulb	
Day 3	Heparin, Tri sodium citrate	
Day 4	Acid Citrate Dextrose	
Day 5	Fluoride & Plain Bulb	
4	Intro. To Hematology & Types of HB	HB Estimation
Day 1	Blood Composition Hemoglobin Intro	
Day 2	Types of Hemoglobin(Normal Hb)	
Day 3	Abnormal Hb/Hb Estimation By Shali's Kit	
Day 4	Estimation of Hb By CMG Method	
Day 5	Other Methods for Hb Estimation(PCV, Oxyhemoglobin, Specific Gravity)	





Gujarat Council of Vocational Training
Gandhinagar



5	Erythropieosis/Leucopoiesis Day 1 Erythropieosis intro/ Sub. Necessary for it Day 2 Leucopoiesis Day 3 RBCs Total Count Day 4 WBCs Total Count Day 5 DC	RBCs Count/WBCs/D.C कौरालम् बलम्
6	Indices/ESR/G6PD0 Day 1 PCV(Pack ed Cell Volume) Day 2 Indices Day 3 ESR Day 4 Estimation Of ESR Day 5 G6PD	PCV/ESR/G6PD
7	Hematological Diseases/Anemias Day 1 Anaemia/Types of anaemias Day 2 Iron deficiency Anemia Day 3 Aplastic Anaemia Day 4 Megaloblastic Anaemia Day 5 Sickel cell anaemia/Thalassemia	SLE/Sickle Cell/RBC/Hb Estimation
8	Leukemia's/FAB Classification Day 1 Introduction Day 2 Superficial Information Day 3 Video presentation Day 4 Different types & explanation only Day 5 Revision	WBC/DC
9	Platelet & Coagulation System Day 1 Introduction &Function of Platelets Day 2 Determination of Platelets Day 3 Determination of Bleeding time Day 4 Determination of Clotting time Day 5 Determination of Prothrombin time	BT/CT/PT
10	Carbohydrate Metabolism/Protein Metabolism Day 1 Intro to Carbohydrate Day 2 Properties/Metabolism Of Carbohydrate Day 3 Determination of Glucose Day 4 Protein Importance/Classification Day 5 Determination of Protein	Glucose/Tot. Pro/Albumin Estimation





11 Day 1 Day 2 Day 3 Day 4 Day 5	Chemistry of Cholesterol/Fat/Trigly./HDL/Lipoprotein Introduction/importance of Lipid Classification Cholesterol/Trigly. Determination of Tg Determination of Cholesterol	Chol./HDL/Trigly./Estimation बलम
12 Day 1 Day 2 Day 3 Day 4 Day 5	Chemistry of Urea/Uric acid/Creatinine Kidney Structure Nephron Structure & Urine formation Urea intro & Determination Uric Acid Intro & Determination Creatinine Intro & Determination	Urea/Uric acid/Creatinine Estimation
13 Day 1 Day 2 Day 3 Day 4 Day 5	Chemistry Of Liver Function test Liver Structure & Function Bilirubin metabolism Determination of S.Bilirubin types Of Jundice/SGPT SGOT/ALP/Thymol Turbidity	Billirubin/SGPT/Alk.Phosphate Estimation
14 Day 1 Day 2 Day 3 Day 4 Day 5	Heart Enzymes/Electrolytes Heart Structure Disease of Heart CPK,SGOT/LDH Enzyme Determination Of Enzyme Electrolytes Na,K,Ca,Cl,P	SGOT/LDH/CPK/Isoenzymes
15 Day 1 Day 2 Day 3 Day 4 Day 5	Electrography Introduction Superficial Information Video presentation Different types & explanation only Revision	Amylase/Acid Phosphate Estimation
16 Day 1 Day 2 Day 3 Day 4 Day 5	Automation/Study Of hormones Introduction Superficial Information Video presentation Different types & explanation only Revision	Calcium/Phosphorus



<p>17</p> <p>Day 1 Day 2 Day 3 Day 4 Day 5</p>	<p>Physiology/Formation of urine/cellular Element</p> <p>Intro/Structure of Kidney Nephron Structure of Nephron Urine Formation Chemical Examination Microscopic examination</p>	<p>Urine analysis/Urine microscopic</p>
<p>18</p> <p>Day 1 Day 2 Day 3 Day 4 Day 5</p>	<p>Parasitology /Blood Parasitology</p> <p>Life Cycle Of Parasite (Malarial) Other Parasite / determination of Parasite introduction of stool analysis microscopic (ova, cyst) Revision</p>	<p>Stool/Blood Analysis</p>
<p>19</p> <p>Day 1 Day 2 Day 3 Day 4 Day 5</p>	<p>Blood Banking/Cross Matching</p> <p>Type of Donor Criteria Selection Blood collection Procedure Labeling Safety Blood Group/Cross match</p>	<p>Diff ABO Blood Group</p>
<p>20</p> <p>Day 1 Day 2 Day 3 Day 4 Day 5</p>	<p>Hemolytic Disease Of New Born</p> <p>Introduction Superficial Information Video presentation Rh. Factor of Blood Grouping Coombs' Test</p>	<p>Coomb's Test/Rho GAM</p>
<p>21</p> <p>Day 1 Day 2 Day 3 Day 3 Day 4 Day 5</p>	<p>Importance Of Each Components</p> <p>Whole Blood Only RBC,WBC,Platelet Factor Affecting in blood coagulation Frozen Plasma Fresh Frozen Plasma Revision</p>	<p>Aphaeresis</p>





22	Serology Day 1 Intro, Defense Mechanism Day 2 Widal Day 3 VDRL Day 4 RA,ASO,CRP Day 5 Pregnancy	VDRL/Widal/RA Latex/Pregnancy Test
23	Immunology Day 1 Immunity Day 2 Vaccination Day 3 HbsAg/Antistreptolysin Day 4 Mono Day 5 HCBG	HbsAg/Anti Streptolysin/Mono/HCBG
24	Introduction to ELISA/TORCH/HIV Day 1 Intro. ELISA Day 2 direct ELISA Day 3 indirect ELISA Day 4 TORCH test Day 5 HIV Intro	HIV/Estimation of IgG, IgA etc
25	Histopathology/Cytology Day 1 Selection of tissue & fixation Day 2 Clearing & dehydration, Embedding Day 3 Process of section cutting microtome Day 4 Conditioning of specimen for staining Day 5 Staining routine (H-E staining)	Special Staining
26	Lab Management Day 1 Patient care Day 2 Waste management Day 3 Safety Management Day 4 doctor follow up Day 5 lab software	Revision Practicals
27	Bacteriology/Microbiology Day 1 Collection of sample, sterilization/heat Day 2 Preparation of media N.agar,Mac conkey Day 3 Classification of bacteria Day 4 Video presentation Day 5 Revision	Gram Staining/diff Culture & its Processing
28	Bacteriology/Microbiology Day 1 Introduction Day 2 Superficial Information Day 3 Video presentation Day 4 Different types of bacteria Day 5 Revision	Sensitivity test/ Biochemical test





29	Body Fluids Day 1 CSF/Semen Day 2 Sputum Day 3 Urine/stool Day 4 Cavity Fluid Intro/Peural/Pericardial Day 5 Peritoneal/Synovial	Examination of Body Fluids <small>हालम बलम</small>
30	Cell Counter Day 1 Introduction Day 2 Superficial Information Day 3 Video presentation Day 4 Different types & explanation only Day 5 Revision	Revision Practical
31	Semi Analyzer Day 1 Introduction Day 2 Superficial Information Day 3 Video presentation Day 4 Different types & explanation only Day 5 Revision	Test Of Practical
32	Pre test Day 1 Theory Day 2 Day 3 Practical Day 4 Day 5	Calorimetric/Spectrophotometer
33 to 51	On the Job Training	
52	Examination	

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