Course Overview

Course code :	LMT504
Course title:	**Clinical Biochemistry I**
Level/semester:	(fifth Semester)
Preceding Courses &Main Subjects	chemistry I
Credit hours: 4	**Theoretical:** 3
	Practical: 2

Learning Outcomes	1. Know theclinical significance and measurement of total gamma glutamyl transferase activity. 2. Know the clinical significance and measurement of total amylase activity 3. Know the clinical significance and measurement of total G6PD activity. 4. -Know the secretary/excretory function of the liver 5. -Understand the synthetic and detoxification function. 6. Know the storage function and hepatic disorders. 7. -Understand the bilirubin metabolism. 8. Know the major causes of jaundice. 9. Understand the principle and procedure for determination of bilirubin concentration test in serum. Understand the principle and procedure for determination of albumin concentration test in serum. 10. -Know the enzymes in the assessment of hepatic function. 11. -Know the composition, structure, forms and cofactors. 12. Know the classification of enzymes. 13. -Understand the enzyme kinetics and factors that influence enzymatic reactions. 14. Know Phosphates; 15. Acid phosphates (ACP) total activity measurement. 16. Alkaline phosphates (ALP) total activity measurement. 17. Know Transaminases and their measurement. Total activity of aspartate and alanine transaminase in serum. 18. Know the Creatine kinase (CK) structure and its clinical significance. 19. Understand the measurement methods of total (CK) activity and causes of an increased plasma CK. 20. Understand the clinical significance of Lactate dehydrogenase (LD). 21. -Measurement methods of total LD activity.

Course Title:-Practical

EXERCISE	CONTENTS	HOURS
1.	Measure of total gamma glutamyltransferase activity by using kinetic methods	**2**
2.	Measurement of amylase activity direct kinetic colorimetric method	**2**
3.	Measurement of total G6PD activity by direct kinetic colorimetric method.	**2**
4.	-Perform biochemical tests for measurement total serum bilirubin by using colorimetric method.	**2**
5.	-Perform biochemical tests for measurement direct serum bilirubin by using colorimetric method	**2**
6.	-Understand the causes of jaundice in newborn and be able to run tests on bilirubin in serum of newborn	**2**
7.	Measure albumin concentrations by using colorimetric method.	**2**
8.	-Measure activity of alkaline phosphates by using kinetic colorimetric method.	**2**
9.	Measure activity of acid phosphates by using kinetic colorimetric method.	**2**
10.	Measure of GOT and GPT by using kinetic colorimetric method.	**2**
11.	Measure Aspartase and alanine transaminases.	**2**
12.	Measure CK by using kinetic method.	**2**
13.	Measure LD by using kinetic method	**2**
14.	Study statistics between the relationship of LD and CK levels and heart attacks.	**2**
15.	Measure of total cholesterol by using colorimetric methods.	**2**
16.	Measure LDL by using colorimetric methods.	**2**
17.	Measure HDL by using colorimetric methods.	**2**
18.	Measure very low density lipoproteins (VLDL)by using enzymatic or colorimetric methods.	**2**
19.	Measure total triglyceride by using enzymatic or colorimetric methods.	**2**
TOTAL		**38**