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**3rd Sem / Branch : DMLT**  
**Sub.: Applied Clinical Biochemistry**

Time : 3Hrs. M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The unconjugated bilirubin (non-polar form) is converted into a more polar form by conjugating with the help of

- a) Sulphuric acid      b) Hydrochloric acid
- c) Glucuronic acid      d) Acetic acid

Q.2 SGPT is related to

- a) Heart      b) Liver
- c) Lungs      d) Pancreas

Q.3 Amylase determination test is used for the detection of

- a) Hepatobiliary disease
- b) Peptic ulcers
- c) Cystic fibrosis
- d) None of these

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Q.4 Alkaline phosphate level is increased in

- a) Rickets
- b) Leukemia
- c) Cardial infection
- d) Pancreatic deficiency

Q.5 Hypokalemia is defined as serum potassium less than

- a) 5.5 meg/L      b) 4.5 meg/L
- c) 3.5 meg/L      d) 2.5 meg/L

Q.6 LDL cholesterol is called "bad" cholesterol as

- a) It causes low blood counts
- b) It changes heart rhythm
- c) It can cause blockage in the arteries
- d) Both a and B

**SECTION-B**

**Note:** Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define bilirubin.

Q.8 Name the transaminase enzyme which is used as biomarker of heart attack.

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- Q.9 Normal value of serum amylase is \_\_\_\_\_.
- Q.10 Phosphorus is very importance for the normal functioning of heart. (True/False)
- Q.11 Write the reference range of triglycerides in normal human male adult.
- Q.12 Define lipoproteins.

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Differentiate between conjugated and unconjugated bilirubin.
- Q.14 Describe the principle of Malloy & Evelyn method for serum bilirubin estimation.
- Q.15 Explain the clinical significance of ALT estimation.
- Q.16 Describe the procedure of SGPT determination.
- Q.17 Write the principle of serum amylase estimation.
- Q.18 Explain the principle of ACP estimation.
- Q.19 Mention the clinical significance of serum calcium determination.
- Q.20 Illustrate the procedure of serum potassium determination.

Q.21 Briefly explain the formation of cholesterol.

Q.22 Write the principle of LDL estimation.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Describe the formation and excretion of bilirubin in detail.
- Q.24 Explain the principle, procedure and clinical significance of SGOT estimation.
- Q.25 a) Write the principle of triglycerides estimation.  
b) Illustrate the procedure of ALP estimation.