

# LABORATORY TECHNICIAN

## 1 YEAR COURSE

### 1<sup>st</sup> Month Theory

- Introduction of Anatomy & Physiology
- Lab Counter (All work of Lab Counter)
  - Read Lab Investigation
  - Blood Draw
  - Sample Labeling

### 1<sup>st</sup> Month Practical

Blood Draw  
Sample Labeling

### 2<sup>nd</sup> Month Theory

- Study different anti coagulant Tube
- Sample Distribute different Lab Dept.
- Name of the Lab Test

### 2<sup>nd</sup> Month Practical

- Study different anti coagulant Tube
- Sample distributes different Lab Dept.
- Handling of Equipment and operates

### 3<sup>rd</sup> Month Theory

Biochemistry

- Introduction of Chemistry Analyzer
  - Routine Chemistry
  - Special Chemistry .

1. Routine Chemistry

- ☒ Blood Sugar
- ☒ L.F.T (Liver Functional Test)
- ☒ Lipid Profile
- ☒ Cardiac Enzymes
- ☒ Urea
- Creatinine
- ☒ Electrolytes
- ☒ Blood Urea Nitrogen
- ☒ Other's

#### Study of the Hormones

- ☒ Serum Prolactin
- ☒ FSH
- ☒ Progesterone
  
- ☒ Other's

### 3<sup>rd</sup> Month Practical

- ☒ Practical for Performing of Test as per Theory
- ☒ Practical Perform as per Theory List no 2
- ☒ Practical Perform as per Study of Hormones.

### 4<sup>th</sup> Months Theory

#### 2. Special Chemistry

- ☒ HbA1C
- ☒ Serum Amylase
- ☒ Serum Insulin
- ☒ Thyroid Profile (T3,T4,TSH)
- ☒ Serum Iron
- ☒ Serum Ferritin
- ☒ T.I.B.C
- ☒ GCT

- GTT
- AFP (Alpha Fetoprotein)
- Other's

#### 4<sup>th</sup> Month Practical

Practical of Following no of Tests

- Insulin
- Thyroid HbA1C
- Serum Amylase
- Serum Profile (T3,T4,TSH)
- Serum Iron
- Serum Ferritin
- T.I.B.C
- GCT
- GTT
- AFP (Alpha Fetoprotein)
- Other's

#### 5<sup>th</sup> Month Theory

- Introduction of Hematology
- Hematology Analyzer
- CBC
- ESR

#### 5<sup>th</sup> Month Practical

- Practical perform as per following tests
- CBC
- ESR

#### 6<sup>th</sup> Months Theory.

- P.T (Prothrombin Time)
- APTT (Activated Partial thromboplastin Time)
- FDPs (fibrin degradation Products)
- Fibrogen Level
- Other's

### **6<sup>th</sup> Months Practical**

Practical as per following tests

- P.T (Prothrombin Time)
- APTT (Activated Partial thromboplastin Time)
- FDPs (fibrin degradation Products)
- Fibrogen Level
- Other's

### **7<sup>th</sup> Months Theory**

- Introduction of Microbiology
- Study of Test about Microbiology
- Procedure Culture
- Preparation of the Slide
- Different Staining
- Gram's Staining
- Name of Organism
- E-Coli
- Klebsella
- Psodumons
- Other's
- Procedure of Sensitivity
- Anti biotic Disc

### **7<sup>th</sup> Month Practical**

Practical as per following list

- Study of Test about Microbiology
- Procedure Culture

- Preparation of the Slide
- Different Staining
- Gram's Staining
- Name of Organism
- E-Coli
- Psodumons
- Other's
- Procedure of Sensitivity
- Anti biotic Disc

## 8<sup>th</sup> Month Theory

### Media Preparation

- Study of Different types of Media
- Procedures of Media preparation
- Name of Media
- Blood Ager
- Mackoncy Ager
- Chocolate Ager
- Other's
- A.F.B (Acid Fast Bacilli)
- Procedure A.F.B Staining
- Culture of A.F.B
- Antibiotic of Ab.F.B

## 8<sup>th</sup> Month Practical

Practical as per following list

- A.F.B (Acid Fast Bacilli)
- Procedure A.F.B Staining
- Culture of A.F.B
- Antibiotic of Ab.F.B

## 9<sup>th</sup> Months Theory

### Serology:

- Introduction of Serology
- Serology Elisa Automation
- Definition of Antibody
- Definition of Antigen
- Different between Antigen and Antibody
- Name of Antibody
- Name of Test
- Anti HAV
- Anti HCV
- HCV HbsAg
- Typhidot
- Widal Test
- Anti HEV
- HIV
- CRP (C.REACTIVE PROTIEN)
- RA Factor
- ASOT

### 9<sup>th</sup> Month Practical

Practical as per following list

- Anti HAV
- Anti HCV
- HbsAg
- Typhidot
- Widal Test
- Anti HEV
- HIV
- CRP (C.REACTIVE PROTIEN)
- RA FACTOR
- ASOT

## 10<sup>th</sup> Months Theory

- Introduction of Parasitology
- Study of Different Parasite

### Urine:

- Perform the Urine
- Physical Examination of Urine
- Microscopic Examination of Urine

### Stool:

- Physical Examination of Stool
- Micro Examination of Stool

### Semen Analysis:

- Physical Examination
- Microscopic Examination

## 10<sup>th</sup> Month Practical

Practical as per following List

- Urine
- Stool
- Semen Analysis

## 11<sup>th</sup> Months Theory

### Histopathology:

- Introduction of Histopathology
- Procedure of Biopsy

- Procedure of Staining Biopsy Slide
- Microscopic Examination

### 11<sup>th</sup> Months Practical

Practical as per following list

- Procedure of Biopsy
- Procedure of Staining Biopsy Slide
- Microscopic Examination

### 12<sup>th</sup> Months Theory

#### **Cytology:**

- Definition of Cytology
- F.N.A Procedure
- Cytology Test for Cancer (Pap, Smear)

### 12<sup>th</sup> Month Practical

- F.N.A Procedure
- Cytology Test for. Cancer (Pap, Smear)
- Computer Reporting and record maintaining, manual software

#### Examination

- 1 Assessment Test every end of the month
- 2 Mid term Examination after Six Months
- 3 Annual Examination after Completion of Course of 12 Month
- 4 All examination and test will be held by Viva, Theory and Practical
- 5 Monthly test marks will be included in mid term examination
- 6 Mid term examination marks will be included in annual examination
- 7 Minimum Passing Marks will be 50% of total marks
- 8 Total marks of course will be 500(300 marks for Annual Examination and 200 Marks for Mid term Examination)

## List of Machinery/Equipments and Apertures for Lab Technician Course

S.no:	Particulars
1)	Hematology
2)	Analyzer
3)	By chemistry Analyzer
4)	Hormone Analyzer
5)	Microscope
6)	Water Bath
7)	Centrifuge
8)	Culture Microscope
9)	Counting Bar Chamber
10)	Auto clip
11)	Electric sterilizer
12)	Refrigerator for Blood Bank
13)	Refrigerator

### **Duration of Studies**

#### **Time Table and Total Hours**

- 1 Classes will be held five days in a week(Mon to Fri) Saturday, Sunday will be off
- 2 Total number of days for studies of one year will be 200
- 3 Total hours for Class/Studies will be 400 hours
- 4 75 minutes for Theory and 45 minutes for Practical every day
- 5 250 hours for Theory during one year
- 6 150 hours for Practical during one year