MEDICAL LAB TECHNICIAN

I YEAR

PART B – VOCATIONAL SUBJECTS

PAPER – I BIO CHEMISTRY – I

BLUE PRINT

PERIODS/WEEK **PERIODS/YEAR: 110**

TIME SCHEDULE, WEIGHTAGE & BLUE PRINT

S.No	NAME OF THE UNIT	No. Of Periods	Weightage in marks	Short answer questions	Essay/ Problem questions
		Theory			
01	Metabolism	10	8	1	1
02	Instrumental methods of Biochemical Analysis	10	6	-	1
03	Separation Techniques	10	8	1	1
04	Nutrition	10	4	-	2
05	Immune Assays	10	4	-	2
06	Distribution of Water & Electro lights	10	8	1	1
07	Liver Function Tests	10	8	1	1
08	Kidneys Function Tests	15	6	-	1
09	Gastric & Pancreatic Function Tests	5	8	1	1
10	Thyroid Function Tests	10	4	2	-
11	Clinical Enzymology	5	6	-	1
12	Body Fluids	5	8	1	1
13	Animation & Quality Control of Biochemistry Labs. Usages of Computer in Labs	5	6	-	1
14	Interpretation of common Clinical Biochemistry investigation	15	8	1	1
	Total	135	68	10	

Note: The question paper contains two sections.

Section - A contains 10 short Questions carries 2 marks each.

Section - B contains 8 Long Questions carries 6 marks each.

The Student has to answer all questions in Section A & any 5 questions in Section B.

MEDICAL LAB TECHNICIAN

I YEAR

PART B – VOCATIONAL SUBJECTS

PAPER – II MICROBIOLOGY& PATHOLOGY

BLUE PRINT

PERIODS/WEEK **PERIODS/YEAR: 110**

TIME SCHEDULE, WEIGHTAGE & BLUE PRINT

.No.	Name of the unit	No. Of Periods	Wight age In marks	Short answer questions	Essay / Problem questions
	MICROBIOLOGY				
I	**Historical introduction to Microbiology**	4	2	1	
II	**Microscopy**	05	6		1
III.	**Sterilization and disinfection–classification**	06	6		1
IV.	**Cleaning, drying &Sterilization of Glass ware**	5	2	1	
V.	**Morphology and classification of Bacteria**	10	6		1
VI.	**Methods of Collection of Clinical Specimen**	**5**	**2**	**1**	
VII.	**Processing of clinical specimen collected**	**10**	**8**	**1**	**1**
VIII.	**Composition and preparation of staining reagents and different methods of**	**10**	**6**		**1**
IX	**Culture Media–Classification of Media, Composition, preparation**	**10**	**2**	**1**	

	PATHOLOGY				
I	**Urine Analysis:**	10	6		1
II	**Preparation of reagents, procedures, principles**	5	2	1	
III	**Sputum Analysis**	10	2	1	
IV	**Semen Analysis**	5	2	1	
V.	**Body fluids–Collection**	10	2	1	
VI.	**Hematology**	20	8		1
VII.	**Disposal of hospital waste**	5	6		1
VIII.	**Glass slides, cover slips– Cleaning&**	5	2	1	

Note: The question paper contains two sections.

Section - A contains 10 short Questions carries 2 marks each.

Section - B contains 8 Long Questions carries 6 marks each.

The Student has to answer all questions in Section A & any 5 questions in Section B.

MEDICAL LAB TECHNICIAN

I YEAR

PART B – VOCATIONAL SUBJECTS

PAPER – III ANATOMY AND PHYSIOLOGY

BLUE PRINT

PERIODS/WEEK **PERIODS/YEAR: 110**

TIME SCHEDULE, WEIGHTAGE & BLUE PRINT

S.No.	NAMEOFTHEUNIT	No. Of Periods	Weight age in marks	Short answer	Essay/ Problem
1.	**Introduction to Human Anatomy and Physiology,**	12	2	1	
2.	**Cell–Definition and properties**	6	2	1	-
3	**Tissue–Classification**	6	2	1	-
4	**Respiratory system**	6	6		1
5.	**Digestive system**	6	8	1	1
6	**Structure of heart**	5	6		1
7	**Lymphatic system.**	5	2	1	
8	**Bones &Joints.**	5	6	-	1
	Nervous system–CNS	5	4	2	-
10	**Excretory system–Urinary system& Physiology of execration**	5	6	-	1
11	**Endocrine system**	5	6		1
12.	**Reproductive system-**	5	6		1
13	**Sense organs-Eye ,ear,**	5	2	1	
14	**Blood**	5	8	1	1
15	**Stress, types and its regulation methods**	5	2	1	
	Total	135	68	10	8

MODEL QUESTION PAPER

MEDICAL LAB TECHNICIAN

I YEAR

PAPER – I BIOCHEMISTRY – I

Time: 3 Hrs **Max.Marks : 50**

SECTION - A

Note: (i) Answer all the Questions
(ii) Each Questioncarries2marks 10 x 2 = 20

1. Give the normal values of Blood sugars.
2. Define solution.
3. Mention the different methods of Blood collection.
4. What are the different types of Urine specimens? Give examples of urinary preservatives.
5. Explain the terms a) Solute b) Slvent.
6. What are the hygroscopic substances? Give examples.
7. Expand GTT and give the normal values of serum uric acid.
8. Write the source of Vitamin-A .And write the diseases caused by its deficiency.
9. Write the names of water soluble vitamins.
10. What is diabetes

SECTION - B

Note: (i) Answer Any five Questions
(ii) Each Questioncarries6marks 5 x 6 = 30

11. Give the classification of Lipids and write the biological importance.
12. Write the determination of Blood glucose using GOD-POD method.
13. Give an oteon different types of Glassware used in Bio-chemistry lab. Write the applications.
14. Describe the prevention, safety and first-Aid in lab accidents.
15. Write the principle and construction of Electrical Centrifuge. And give the applications.
16. Define Colorimetry. Describe the construction, operation and uses of colorimeter.
17. What is Phlebotomy? Describe the collection of venous blood.
18. Write the principle, construction and applications of Spectrophotometer.

MODEL QUESTION PAPER

MEDICAL LAB TECHNICIAN

I YEAR

PAPER – II MICROBIOLOGY & PATHOLOGY

Time: 3 Hrs **Max.Marks : 50**

SECTION - A

Note: (i) Answer all the Questions
(ii) Each Questioncarries2marks 10 x 2 = 20

1. Mention the names of different body fluids.
2. Define Anuria, olaguria and poly urea.
3. Write the names of Bile salts and Bile Pigments.
4. Name acid fast bacteria
5. Write about a) Glycosurea b) Hematuria.
6. What is Liquification time of Semen?
7. Define Sterilization and disinfection
8. Name reagents used in Gramstaining
9. Write the principle of Compound Micro-scope
10. Write the contributions of Antonyvan Leeuwenhoek & Louis Pasteur to Microbiology

SECTION - B

Note: (i) Answer Any five Questions
(ii) Each Questioncarries6marks 5 x 6 = 30

11. Explain about hanging drop preparation
12. Describe the Estimation of ESR. Give the normal values of and write the clinical importance.
13. Write the Qualitative determination of Urine sugar. And write the clinical importance.
14. How do you count WBC. Write its clinical significance
15. Describe the construction & operation of compound Microscope and write the applications.
16. What are the different methods of Sterilization? Describe the construction and operation of Autoclave
17. Write a note on Media for Blood cultures and Anaerobic media. Write the composition & preparation of Zeil Nelsons stain.
18. Estimation of Hemoglobin by Sahli's method.

MODEL QUESTION PAPER

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I YEAR

PAPER – III ANATOMY & PHISIOLOGY

Time: 3 Hrs **Max.Marks : 50**

SECTION - A

Note: (i) Answer all the Questions
(ii) Each Questioncarries2marks 10 x 2 = 20

1. Define Anatomy & Physiology
2. Mention the varieties of tissues in our body
3. Write the functions of saliva
4. Define cell name any two cell organelles
5. What is alveoli
6. What is Neuron? Write the parts of neuron
7. What are the endocrine Glands
8. Write the composition of urine
9. Mention the parts of female reproductive system
10. Name the hormons of thyroid gland

SECTION - B

Note: (i) Answer Any five Questions
(ii) Each Questioncarries6marks 5 x 6 = 30

11. Draw the Neat and labeled diagram of heart and explain coronary circulation
12. Write the classification of Bones with examples and mention the functions of Bones
13. Explain about Physiology of Respiration
14. What is stress? Explain types of stress and regulation tips
15. Draw the labeled structure of stomach and explain the functions of liver
16. Write the composition of blood and functions of blood
17. Explain the structure of uterus with neat label diagram
18. Draw neat diagram of urinary system with labeling, explain the formation of urine