[LF 1014] **OCTOBER 2014** **Sub. Code: 1253**

M.Sc., MEDICAL LABORATORY TECHNOLOGY
(2013-2014 Batch onwards)
FIRST YEAR
PAPER III – HEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code : 281253

Time : Three hours **Maximum : 100 marks**

I. Elaborate on : **(2 x 20 = 40)**

1. Classify anemia and discuss the laboratory findings in case of P. Thalassemia.
2. Role of RNA in gene expression.

II. Write notes on : **(10 x 6 = 60)**

1. Anticoagulants.
2. Principle of coagulation analyzer
3. Prothrombin Time
4. FISH
5. Liver function Tests
6. Principle and applications of PCR.
7. Dyserythropoietic anemia.
8. Cord Blood
9. Incomplete antibodies in Haemolytic disorders.
10. Hereditary qualitative platelet disorders

****

[LH 0415] **OCTOBER 2015** **Sub. Code: 1253**

M.Sc. (MEDICAL LABORATORY TECHNOLOGY) DEGREE EXAMINATION

(From 2013-2014 Batch onwards)

FIRST YEAR

PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code : 281253

Time: Three Hours **Maximum: 100 marks**

Answer ALL questions

I. Elaborate on: **(2 x 20 = 40)**

1. Classify malignant disorders of WBCs. Discuss the laboratory findings in chronic myeloid leukemia.
2. Discuss the principle of automated Blood analyzer and discuss the applications.

II. Write Notes on: **(10 x 6 = 60)**

1. Pre-analytical, Analytical and Post-analytical errors in single collection.
2. Describe the counting chambers used in Haematology and their application.
3. Classify platelet disorders.
4. Discuss principle of electrophoresis and application.
5. Describe the principle of a centrifuge. Enumerate the types with their application.
6. Discuss iron deficiency anemia.
7. Discuss what is DNA as a genetic material. Describe the structure and replication.
8. Discuss the principle of automated immunohaematology analyzers.
9. Discuss principle of fluorescent microscopy and its application.
10. Haemolytic disease of the newborn.

****

[LJ 1016] OCTOBER 2016 **Sub. Code: 1253**

M.Sc. MEDICAL LABORATORY TECHNOLOGY EXAMS
FIRST YEAR
PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code: 281253

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Classify anaemia and discuss in detail laboratory methods in investigating immune hemolytic anaemia.

2. Discuss in detail about automation in hematology.

II. Write notes on: **(10 x 6 = 60)**

1. Chemical disinfectants.
2. Lab investigations of chronic myeloid leukemia.
3. Anticoagulants.
4. Flow cytometry.
5. Activated partial thromboplastin time.
6. Semen analysis.
7. Lab investigations of iron deficiency anaemia.
8. Fluorescence microscope.
9. Hemolytic disease of newborn.
10. Thrombocytopenia.

****

[LL 1017] OCTOBER 2017 **Sub. Code: 1253**

M.Sc. MEDICAL LABORATORY TECHNOLOGY EXAMS
FIRST YEAR
PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code: 281253

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Classify anemias. Discuss in detail about the lab diagnosis of haemolytic anemias.

2. Discuss the principle of automated blood analyser. Give an account of its application.

II. Write notes on: **(10 x 6 = 60)**

1. Urine analyser.
2. Flow cytometry.
3. Coomb's test.
4. Prothrombin time.
5. Quality control in hematology.
6. What is hematocrit? How will you report it?
7. Hb electrophoress.
8. LE cell preparation.
9. Cryoprecipitate.
10. Anti-coagulants.

****

[LM 0518] MAY 2018 **Sub. Code: 1253**

M.Sc. MEDICAL LABORATORY TECHNOLOGY EXAMS
FIRST YEAR
PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code: 281253

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Write in detail about automation in clinical pathology laboratory.

2. How will you investigate a case of bleeding disorder?

II. Write notes on: **(10 x 6 = 60)**

1. Preparation of fresh frozen plasma.
2. Cross matching.
3. Bleeding time.
4. What is INR? What is its significance?
5. How will you store blood in the blood bank?
6. Tests for the blood donors.
7. Sickling test.
8. Haemoparasites.
9. Stool examination.
10. Microalbuminurea.

****

[LN 1018] OCTOBER 2018 **Sub. Code: 1253**

M.Sc. MEDICAL LABORATORY TECHNOLOGY EXAMS
FIRST YEAR
PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code: 281253

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Write a short note on White blood cell disorders. Add a detailed note on Leukemias and Its diagnosis.

2. Discuss in detail about the automation in clinical pathology laboratory.

II. Write notes on: **(10 x 6 = 60)**

1. Composition of blood.
2. Steps in the selection of blood donors-Donor screening.
3. Bleeding Disorders.
4. Scintillation counter.
5. Radioactivity and Half life units.
6. Westergren method. Significance of measuring ESR.
7. Making and staining Peripheral blood smears.
8. Hemolytic Disease of the Newborn (HDNB).
9. Cross matching.
10. Classification of transfusion reactions.

****

[LO 0519] MAY 2019 **Sub. Code: 1253**

M.Sc. MEDICAL LABORATORY TECHNOLOGY EXAMS
FIRST YEAR
PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code: 281253

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Classify Anaemia and discuss the laboratory methods in investigating Thalassemia.

2. Discuss in detail about principle and applications of various microscopes.

II. Write notes on: **(10 x 6 = 60)**

1. Anticoagulants.
2. ESR.
3. Semen analysis.
4. Blood grouping and its role in transfusion.
5. Fluorescence In Situ Hybridisation and its applications.
6. Clotting time.
7. Centrifuge and its uses.
8. Bone marrow aspiration and staining.
9. Histogram.
10. Preparation of thick smear, staining and its uses.

****

[LP 1019] OCTOBER 2019 **Sub. Code: 1253**

M.Sc. MEDICAL LABORATORY TECHNOLOGY EXAMS
FIRST YEAR
PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code: 281253

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Pre-analytical, Analytical and Post analytical errors.

2. Haemolytic Anemia – classification and role of lab in their diagnosis.

II. Write notes on: **(10 x 6 = 60)**

1. Principle involved in automated haematology analyzer for Platelet and WBC Count.
2. Karyotyping.
3. Different types of vacutainers used for blood collection and explain any two.
4. Platelet agitators.
5. Fluorescence in Situ Hybridization.
6. RNA Translation.
7. ESR – different methods and factors influencing it.
8. Principle and application of PH meter.
9. Chronic Myeloid Leukemia.
10. Principle involved in staining of blood smear.

****

[LQ 1019] NOVEMBER 2020 **Sub. Code: 1253**

(MAY 2020 SESSION)

M.Sc. MEDICAL LABORATORY TECHNOLOGY EXAMS

FIRST YEAR

PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code: 281253

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Classification, pathophysiology and diagnosis of Leukemia.
2. Laboratory organization and safety.

II. Write notes on: **(10 x 6 = 60)**

1. Thalassemia.
2. Principle and Clinical application of Incubator.
3. Compound Microscope.
4. RBC Indices.
5. ESR – different methods and factors influencing it.
6. Laboratory finding of Iron deficiency Anemia.
7. RNA Transcription.
8. Radioisotopes.
9. Phlebotomy Technique.
10. Structure and function of RBC.

****

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321] MARCH 2021 Sub. Code: 1253

(OCTOBER 2020 EXAM SESSION)

M.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR (2011-2012 Regulation - From 2013-2014 onwards)

PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY

Q.P. Code : 281253

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Define Haematopoiesis. Write a detail note on the signalling pathway growth factors in haematopoiesis.
2. Define urinalysis. Explain the collection, preservation and physical examination of the urine sample.

II. Write notes on: **(10 x 6 = 60)**

1. Write a note on Leukoerythroblastic picture and causes.
2. Discuss about the collection, preservation and analysis of semen sample.
3. Explain the methods of estimation of haemoglobin.
4. Define Neutrophilic leucocytosis and leukopenia and mention 3 causes.
5. Write about pre-analytical and analytical errors in detail.
6. What are the applications of flowcytometry.
7. Classify qualitative and quantitative platelets disorders.
8. Write 3 causes of eosinophilia and monocytosis.
9. What is the criteria for diagnosis acute myeloid leukaemiain bone marrow according to WHO classification and mention the names of acute myeloid leukaemia.
10. Mention RBC indices formulae and their applications.

****

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0921] **SEPTEMBER 2021** **Sub. Code: 1253**
(MAY 2021 EXAM SESSION)

M.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR (2011-2012 Regulation - From 2013-2014 onwards)
PAPER III – HAEMATOLOGY AND CLINICAL PATHOLOGY
Q.P. Code : 281253

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Classify and write about the Lab investigations of haemolytic anaemia.
2. Classify platelet disorders. Mention the Qualitative and quantitative disorders of platelets in detail.

II. Write notes on: **(10 x 6 = 60)**

1. Write a note Polymerase chain reaction and their applications.
2. Write about the physical examination of urine sample.
3. Classify Alpha thalassemia and mention the smear and lab investigations in diagnosis.
4. Describe the smear findings in megaloblastic anaemia and mention the causes.
5. Explain about the Estimation of reducing sugars in urine.
6. Write a note on chronic lymphocytic leukemia.
7. Write the importance of Perl's stain in bone marrow studies.
8. Mention the smear findings in liver disease and mention the biochemical lab investigations and mention 3 causes for liver disease.
9. Write a note on anticoagulants.
10. Write the causes for isolated prolonged Activated Partial Thromboplastin Time and mention the usefulness of mixing test.

****