

Lesson Plan

Name of the Faculty : Ms. Seema Sindhu
 Discipline : Medical Lab Technology
 Semester : 3rd
 Subject : Parasitology & Virology
 Lesson Plan : 15 weeks

Workload (lecture/practical) per week (in hours): Lectures-03, practical-04

| Week | Theory | | Practical | |
|-----------------------------------|------------------|--|---|--|
| | Lecture day | Topic (including assignment test) | Practical Day (2 hours each day), (2 hours each day * 2 days in week = 4 weekly load) | Topic |
| 1 st | 1 st | Introduction to the whole syllabus of CMB-III | 1 st & 2 nd | 1. Collection and routine stool examination for detection of intestinal parasites. |
| | 2 nd | Ch-1 Introduction to medical parasitology | | |
| | 3 rd | General characteristics, morphology, classification of Protozoa, Helminthes | | |
| 2 nd | 4 th | Lab sample collection for detection of parasites (Stool) Parasite transportation | 3 rd & 4 th | 2. Experiment on saline preparation |
| | 5 th | Concentration Techniques of stool, Concentration techniques for demonstration of ova and cysts | | |
| | 6 th | Parasite processing and preservation for routine investigation – (blood) | | |
| 3 rd | 7 th | Giardia morphology, lifecycle, lab diagnosis | 5 th & 6 th | 3. Experiment on Lugol's Iodine preparation |
| | 8 th | Entamoeba histolytica morphology, lifecycle, lab diagnosis | | |
| | 9 th | Ancylostoma morphology, lifecycle, lab diagnosis | | |
| (1st Sessional) | | | | |
| 4 th | 10 th | Ascaris lumbricoides morphology, lifecycle, lab diagnosis | 7 th & 8 th | 4. Experiment on concentration methods - floatation method (saturated salt solution/zinc sulphate) |
| | 11 th | Tsoliium, morphology, lifecycle, lab diagnosis | | |
| | 12 th | Tsaginata morphology, lifecycle, lab diagnosis | | |
| 5 th | 13 th | Malarial parasite General Characteristics, lifecycle (P. Vivax) | 9 th & 10 th | 5. Experiment on sedimentation method (formal ether) |
| | 14 th | Malarial parasite morphology, lab diagnosis (P. Vivax) | | |
| | 15 th | Malarial parasite morphology, lifecycle, lab diagnosis (P. Falciparum) | | |

| | | | | | |
|---------------------------------|------------------|--|---|-------------------------------------|--|
| 6 th | 16 th | | Virology – introduction, General Characteristics | 11 th & 12 th | 6. Identification of adult worms/cysts from preserved specimen Tape, Hook, Roundworm, |
| | 17 th | | Virus origin, reaction to Physical and chemical & Replication: classification | | |
| | 18 th | | Virus classification and cultivation | | |
| 2nd Sessional | | | | | |
| 7 th | 19 th | | Medically important viruses HBV | 13 th & 14 th | 7. Identification of E. coli, Giardia, Entamoeba |
| | 20 th | | Polio pathogenicity, lab diagnosis, prevention | | |
| | 21 st | | Rabies pathogenicity, lab diagnosis, prevention | | |
| 8 th | 22 nd | | HIV pathogenicity, lab diagnosis, prevention | 15 th & 16 th | 8. To prepare staining solution and blood smear (thick and thin smear) and perform staining of smear (Leishman, Giemsa) |
| | 23 rd | | Transportation of virology sample & Storage of virology sample | | |
| | 24 th | | Virological sample | | |
| 9 th | 25 th | | Revision of unit No. 1 & 2 | 17 th & 18 th | 9. Examination and demonstration of malaria parasite and their various stages |
| | 26 th | | Revision of unit No. 3 & 4 | | |
| | 27 th | | Revision of unit No. 5 & 6 | | |
| 10 th | 28 th | | Revision of unit No. 7 & 8 | 19 th & 20 th | 10. Revision of Experiment No. 1, 2, 3. |
| | 29 th | | Assignment 1 st | | |
| | 30 th | | Revision of unit No. 9 & Rabies (10) | | |
| 11 th | 31 st | | Revision of unit No. Polio & HBV (10) | 21 st & 22 nd | 11. Revision of Experiment No. 4, 5, 6. |
| | 32 nd | | Assignment 2 nd | | |
| | 33 rd | | Revision of unit No. HIV (10) & Unit No. 11 | | |
| 12 th | 34 th | | Assignment 3 rd | 23 rd & 24 th | 12. Revision of Experiment No. 7, 8, 9. |
| | 35 th | | Revision of unit No. 1, 2 & 3 | | |
| | 36 th | | Revision of unit No. 4, 5 & 6 | | |
| 3rd Sessional | | | | | |
| 13 th | 37 th | | Revision of unit No. 7, 8, 9, 10 | 25 th & 26 th | • Problem solving sessions of students in practical |
| | 38 th | | Revision of Unit No. 11 | | |
| | 39 th | | FAQ's syllabus CMB | | |
| 14 th | 40 th | | Revision of Unit No. 1-8 | 27 th & 28 th | • VIVA |
| | 41 st | | Revision of Unit No. 9-11 | | |
| | 42 nd | | FAQ's syllabus CMB | | |
| 15 th | 43 rd | | Revision of Whole syllabus | 29 th & 30 th | • Revision of all experiments • |
| | 44 th | | Revision of Whole syllabus | | |
| | 45 th | | FAQ's syllabus CMB | | |

Lesson Plan

Name of the Faculty : Ms. Seema
 Discipline : Medical Lab Technology
 Semester : 3rd
 Subject : Clinical Haematology
 Lesson Plan : 15 weeks
 Workload (lecture/practical) per week (in hours): Lectures-03, practicals-04

| Week | | | Theory | Practical | |
|--|------------------|-------------------------|---|---|--|
| | Lecture day | Tentative date of lect. | Topic (including assignment test) | Practical Day (2 hours each day), (2 hours each day * 2 days in week = 4 weekly load) | Topic |
| 1 st | 1 st | | Introduction to the whole syllabus of Haematology-III | 1 st & 2 nd | 13. ESR estimation in blood sample |
| | 2 nd | | ESR and PCV | | |
| | 3 rd | | Introduction | | |
| 2 nd | 4 th | | Various methods of estimation of ESR & PCV | 3 rd & 4 th | 14. To determine PCV by various methods |
| | 5 th | | Merits and Demerits | | |
| | 6 th | | Red cell Indices, Hb, PCV & RBC | | |
| 3 rd | 7 th | | Supravital stain & Reticulocyte counting – Introduction | 5 th & 6 th | 15. To determine Red Cell Indices |
| | 8 th | | Principle, Procedure and calculation | | |
| | 9 th | | MCV, MCH, MCHC definition, range calculation & interpretation | | |
| 1st Sessional Hematology | | | | | |
| 4 th | 10 th | | NESTROFT | 7 th & 8 th | 16. Counting of Reticulocyte in blood |
| | 11 th | | Red cell fragility test | | |
| | 12 th | | Significance of red cell fragility | | |
| 5 th | 13 th | | Variation in physiological values of Hb | 9 th & 10 th | 17. Perform red cell fragility test on blood |
| | 14 th | | Variation in physiological values of PCV | | |
| | 15 th | | Variation in physiological values of T.L.C | | |
| 6 th | 16 th | | Variation in physiological values of Platelets count | 11 th & 12 th | 18. Perform sickling |
| | 17 th | | Introduction to Anemia, definition & morphological classification | | |

18th

Anemias-Etiological
classification

testonblood

2nd Sessional Hematology

| | | | | | |
|--------------------------------------|------------------|--|--|-------------------------------------|--|
| 7 th | 19 th | | Laboratory diagnosis of: Iron deficiency anaemia | 13 th & 14 th | 19. Estimation of fetal Hb by alkaline denaturation test |
| | 20 th | | Lab diagnosis – Haemolytic anaemia | | |
| | 21 st | | Lab diagnosis – Aplastic anaemia | | |
| 8 th | 22 nd | | Lab diagnosis – Megaloblastic anaemia | 15 th & 16 th | 20. Estimation of plasma Hb |
| | 23 rd | | Laboratory diagnosis of: including sickle cell anaemia | | |
| | 24 th | | Laboratory diagnosis of: thalassaemia | | |
| 9 th | 25 th | | Revision of Unit No. 1 | 17 th & 18 th | 21. Estimation of G6PD by Methylene Blue Reduction test |
| | 26 th | | Revision of Unit No. 2 | | |
| | 27 th | | Revision of Unit No. 3.1, 3.2, 3.3 | | |
| 10 th | 28 th | | Revision of Unit No. 3.4 | 19 th & 20 th | 22. Revision of Experiment No. 1, 2, 3. |
| | 29 th | | Assignment 1 st | | |
| | 30 th | | Revision of Unit No. 4.1, 4.2a | | |
| 11 th | 31 st | | Revision of Unit No. 4.3, 4.4a & b | 21 st & 22 nd | 23. Revision of Experiment No. 4, 5, 6. |
| | 32 nd | | Assignment 2 nd | | |
| | 33 rd | | Revision of Unit No. 4.4 c | | |
| 12 th | 34 th | | Revision of Unit No. 4.2 d | 23 rd & 24 th | 24. Revision of Experiment No. 7, 8, 9. |
| | 35 th | | Revision of Unit No. 5 | | |
| | 36 th | | Revision of unit No. 1 & 2 | | |
| 3rd Sessional Exam | | | | | |
| 13 th | 37 th | | Revision of Unit No. 3 & 4 | 25 th & 26 th | <ul style="list-style-type: none"> • Problem solving sessions of students in practicals |
| | 38 th | | Assignment 3 rd | | |
| | 39 th | | Revision of Unit No. 3 & 4 | | |
| 14 th | 40 th | | Revision of Unit No. 5 | 27 th & 28 th | <ul style="list-style-type: none"> • VIVA |
| | 41 st | | FAQ's in syllabus HTL | | |
| | 42 nd | | Revision of Whole syllabus | | |
| 15 th | 43 rd | | FAQ's in syllabus HTL | 29 th & 30 th | <ul style="list-style-type: none"> • Revision of all experiments |
| | 44 th | | Revision of Whole syllabus | | |
| | 45 th | | Revision of Whole syllabus | | |

LESSONPLAN

NAMEOFFACULTY :Sh.Ashish
DISCIPLINE :DMLT
SEMESTER :3rd
SUBJECT :Histopathologyandcytology
LESSONPLANDURATION :15weeks
WorkLoadPerweek : Lectures-3,Practical-4

| THEORY | | | | |
|-----------------|----------------|-------------|--|---|
| Week | Lecture | Date | TOPIC(ASSINGNMET/TEST) | Practical |
| 1 st | | | Introductionanddefinitionof HistologyHistopathology,BiopsyAutopsy,A utolysis,Putrefaction | 1.Reception of specimen,labeling and preservingthespecimen |
| | | | UnfixedTissuepreparations Imprintmethods–Impression, Smears,Teasedpreparation, Squashed preparation,Frozensection | |
| | | | Fixed Tissue preparationsParaffinembedding,Celloidinembedding, GelatinembeddingReception,recording,labelingan dpreservationofhistologicalspecimen | |
| 2 nd | | | Fixation(Histological Specimens) | 2. Preparationofvariou ssmears by unfixedmethods - Imprintsmears - Teasedsmears - Squashedsmears |
| | | | Classificationoffixatives Composition of various fixatives, Advantages anddisadvantages | |
| | | | Processing(byParaffinTechnique)Dehydration | |
| 3rd | | | Infiltrationandimpregnation | 3. Preparation of differentfixativeswithsp ecialemphasisonprepara tionof formaline basedfixatives |
| | | | Automation:Histokinete(automatictissueprocessor) -itstypes, working, | |
| | | | Automation: Histokinete (automatic tissueprocessor) -itscareandmaintenance | |
| 4th | | | MicrotomeTypes, Advantagesanddisadvantages | 4. Preparationofparaffi nblocksfromvarioustis suepiecesandlabeling |
| | | | Microtome Knives and Various types of knives,SharpeningofknivesHoningtechnique,Strop ping technique, | |
| | | | Automation: Automatic knife sharpener –uses, careand maintenance, Uses of abrasives and lubricants,Introductiontodisposableblades-their advantages anddisadvantages. | |
| | | | Useoftissuefloatationbath,Useofvariousadhesivemed iaandliftingofsectionstotheslide Errors/cutting faultsinsectionsandtheirremedies | |
| | | | Theoryofstaining,Principleandmechanismof routinestain (HaematoxylinandEosin) | |

| | | | | |
|--|--|--|--|--|
| | | | <p>Various steps of staining (Haematoxylin and Eosin)</p> <ul style="list-style-type: none">- Deparaffinization- Hydration- Nuclear Staining- Differentiation- Blueing | |
|--|--|--|--|--|

| | | | | |
|------|--|--|---|--|
| | | | <ul style="list-style-type: none"> - Counterstaining - Dehydration - Clearing and Mounting - Results | |
| 6th | | | <p>Automation: Use of automatic stainer and coverslipper</p> <p>Mountants Various types of mounting media (aqueous, resinous) Advantages and Disadvantages</p> <p>Cell Definition and function and Structure</p> <p>Multiplication (Mitosis and Meiosis)</p> | 5. Practice of lifting of sections on the slides |
| 7th | | | <p>Exfoliative Cytology</p> <p>Introduction Preparation of vaginal & cervical smears</p> <p>Collection and Processing of specimen for cytology</p> <ul style="list-style-type: none"> - Urine - Sputum - CSF (Cerebrospinal Fluid) - Other fluids <p>Fixation (Cytological Specimen) Definition and Various types of Cytological fixatives Advantages and Disadvantages</p> | 6. Performing H&E staining on sections and mounting of tissue sections |
| 8th | | | <p>Principle, Technique and interpretation of results in</p> <ul style="list-style-type: none"> - May Grunwald & Giemsa staining - Haematoxylin and Eosin staining - Role of Laminar air-flow and cytotechnician in cytology | 7. Demonstration of cell using buccal smear/urine sample |
| | | | Revision of unit 4, 5 & 6 | |
| | | | Revision of unit 7, 8 & 9 | |
| 9th | | | Revision of unit 7, 8 & 9 | 8. Processing of sputum sample for malignant cytology |
| | | | Assignment 1 st | |
| | | | Revision of unit 10, 11 & 12 | |
| | | | Assignment 2 nd | |
| 10th | | | Revision of unit 13, & 14 | 9. To perform PAP stain on givens smear |
| | | | Revision of unit 7, 8 & 9 | |
| | | | Assignment 3 rd | |
| 11th | | | Revision of Cytology | 10. To perform MGG stain on givens smear |
| | | | Revision of Whole Syllabus | |
| | | | FAQ's in syllabus HPL | |
| 12th | | | Revision of Whole syllabus | 11. To perform H&E on givens smear |
| | | | Revision of Whole syllabus | |
| | | | Revision of Whole syllabus | |
| 13th | | | Preparation of vaginal & cervical smears | 12. To demonstrate various automation by use of brochures, chart set etc |
| | | | Haematoxylin and Eosin staining | |
| | | | Revision of Histopathology | |
| 14th | | | Revision of Whole Syllabus | 13. Revision |
| | | | Revision of Histopathology | |
| | | | Revision of Cytology | |
| 15th | | | Revision of Histopathology | 14. Revision |
| | | | Revision of Cytology | |
| | | | Revision of Whole Syllabus | |

LESSON PLAN

NAME OF FACULTY : Ms. Sonia
DISCIPLINE : DMLT
SEMESTER : 3rd
SUBJECT : Clinical Biochemistry III
LESSON PLAN DURATION : 15 weeks
Work Load Per week : Lectures-3, Practical-3

| WEEK | THEORY | | PRACTICAL | |
|------|-------------|--|--------------------------------------|----------------------------|
| | LECTURE DAY | TOPIC (ASSIGNMENT/TEST) | PRACTICAL DAY (Each day for 3 hours) | TOPIC |
| 1st | 1 | Formation of bile pigments | 1st | Serum bilirubin estimation |
| | 2 | Formation and excretion of bilirubin | | |
| | 3 | Conjugated and unconjugated bilirubin | | |
| 2nd | 4 | Principle and procedures of serum bilirubin estimation (Direct & Indirect) | 2nd | Phosphorus estimation |
| | 5 | Reference values Clinical significance | | |
| | 6 | Revision | | |
| 3rd | 7 | SGOT and SGPT introduction | 3rd | Calcium estimation |
| | 8 | Principle and procedures of estimation SGOT | | |
| | 9 | Principle and procedures of estimation SGPT | | |
| 4th | 10 | Reference values Clinical significance | 4th | Renal clearance tests |
| | 11 | Revision | | |
| | 12 | Assignment and Test of unit 1 and 2 | | |
| 5th | 13 | ALP and ACP introduction. | 5th | SGOT estimation |
| | 14 | Principle and procedures of estimation ALP | | |
| | 15 | Principle and procedures of estimation ACP | | |
| 6th | 16 | Reference values Clinical significance | | SGPT estimation |
| | 17 | Revision | | |
| | 18 | Serum Amylase Introduction | | |
| 7th | 19 | Principle and procedures of estimation | 7th | ALP estimation |
| | 20 | Reference values Clinical significance | | |
| | 21 | Serum Calcium and Phosphorus introduction | | |
| 8th | 22 | Principle and procedures of estimation | 8th | ACP estimation |
| | 23 | Reference values Clinical significance | | |
| | 24 | Revision | | |
| 9th | 25 | Test and Assignment | 9th | Total cholesterol |
| | 26 | Lipid Profile Introduction | | |

| | | | | |
|------|----|---|------|---|
| | 27 | Formation of cholesterol High density and low density cholesterol | | estimation |
| 10th | 28 | Principles and procedures of estimation | 10th | Total cholesterol estimation |
| | 29 | Reference value Clinical significance | | |
| | 30 | Triglycerides, principle and procedure of estimation | | |
| 11th | 31 | Importance of various ratios of HDL | 11th | Triglyceride estimation |
| | 32 | Importance of various ratios of LDL | | |
| | 33 | Importance of various ratios of VLDL | | |
| 12th | 34 | Revision | 12th | Estimation of HDL and calculation of VLDL and LDL |
| | 35 | Urinary Proteins and Creatinine | | |
| | 36 | 24hr. urinary proteins and creatinine estimation | | |
| 13th | 37 | Reference values Clinical significance | 13th | Estimation of HDL and calculation of VLDL and LDL |
| | 38 | Revision | | |
| | 39 | Renal Function Tests (Renal clearance Tests) Introduction | | |
| 14th | 40 | Renal clearance Tests | 14th | Urinary protein and creatinine estimation (24hr) |
| | 41 | Urea clearance Test | | |
| | 42 | Creatinine clearance test | | |
| 15th | 43 | Clinical significance | 15th | Estimation of serum amylase |
| | 44 | Revision | | |
| | 45 | Test And Assignment | | |

Lessonplan

Name of the Faculty : Mr. Ashish
 Discipline : DMLT
 Semester : 3rd
 Subject : Transfusion Medicine
 Lesson Plan Duration: 15 weeks

Work load (Lecture/practical) per week (in hours) = Lecture=3, Practical=2

| WORK | THEORY | | Practical | |
|-----------------|-------------|--|---------------|--|
| | Lecture Day | Topic (Including assignment/test) | Practical Day | Topic |
| 1 st | 1 | Historical introduction to Transfusion medicine (blood banking) | L1 | Performing ABO blood grouping by Slide & Tube Test |
| | 2 | Definition of antigen and antibody | | |
| | 3 | Classification of antigens | | |
| 2 nd | 4 | Classification of antibodies. | L2 | Performing Rh grouping by Slide & Tube technique |
| | 5 | Introduction to ABO blood grouping | | |
| | 6 | Antigens and antibodies involved in ABO blood grouping | | |
| 3 rd | 7 | Principle and procedure of ABO blood grouping Slide method | L3 | Performance of Coombs Test by Direct method |
| | 8 | Principle and procedure of ABO blood grouping Tube method | | |
| | 9 | Various blood subgroups (A ₁ , A ₂ , A ₁ B, A ₂ B) | | |

| | | | | |
|-----------------|----|---|----|--|
| 4 th | 10 | Assignment | L4 | Performance of Coombs Test by Indirect method |
| | 11 | Introduction to Rh Blood Group System | | |
| | 12 | Antigen and antibody involved in Rh blood grouping | | |
| 5 th | 13 | Principle and procedure of Rh grouping | L5 | Cross Matching (compatibility testing) by Major testing |
| | 14 | Variant of D antigen | | |
| | 15 | Types and composition of various Anticoagulants | | |
| 6 th | 16 | Advantages and disadvantages of various anticoagulants | L6 | Cross Matching (compatibility testing) by Minor testing |
| | 17 | Criteria for selection of Donor | | |
| | 18 | Screening of blood donor for Blood Collection and storage | | |
| 7 th | 19 | Characteristics of ideal blood donor. | L7 | Preparation of anticoagulant s- ACD (Acid Citrate Dextrose)- CPD (Citrate Phosphate Dextrose)- CPDA (Citrate Phosphate Dextrose Adenine) |
| | 20 | Blood collection procedure | | |
| | 21 | Transportation and storage | | |
| 8 th | 22 | Screening of blood donors for MP | L8 | Malarial Parasite test by Thick smear preparation |

| | | | | |
|-----------------|----|--------------------------|----|--------------------------------|
| | 23 | StainingofbloodfilmforMP | | |
| | 24 | SlidetestforVDRL | | |
| 9 th | 25 | VDRLBuffer Salinetest | L9 | MalarialParasitetestbyT hin |
| | 26 | ELISAbasedHIVtest | | smearpreparation |