**Lesson Plan**

Name of the Faculty : Ms Monika Khatkar (Visiting Faculty)

Discipline : Medical Lab Technology

Year : 1st Year

Subject : Haematology-I&11

Lesson Plan : 30 weeks (from July2018 -April 2019)

Work load (lecture/practical) per week (in hours) : Lectures-03, practicals-04

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Theory** | | **Practical** | |
| **Lecture**  **day** | **Topic(including assignment test)** | **Practical**  **Day**  **(2 hours lab each day), (2 hours each day\*2days in week=4 weekly load)** | **Topic** |
| 1st | 1st | Introduction to the whole syllabus of Haematology-I | 1st & 2nd | Demonstration of safety rules(universal precautions) in haematology laboratory |
| 2nd | **Ch - 1** Haematology |
| 3rd | Various glasswares used in lab |
| 2nd | 4th | Various plasticwares used in lab | 3rd &4th | Demonstration of Various equipments |
| 5th | Hb tube , Hb pipette |
| 6th | Assignment -1 Various wares used in lab |
| 3rd | 7th | RBC , WBC pipette | 5th & 6th | Demonstration of various parts of centrifuge |
| 8th | Revision of unit 1 |
|  | 9th | Apparatus and instruments used in lab |
| 4th | 10th | Test of unit 1 | 7th & 8th | Functioning and care of centrifuge |
| 11th | Water bath , blood cell counter |
| 12th | Blood mixer |
| 5th | 13th | Assingnment -2 Centrifuge and blood mixer | 9th & 10th | Viva of the exrperiments performed in lab |
| 14th | Revision of unit 2 |
| 15th | Haemopoeisis |
| 6th | 16th | Erythropoiesis | 11th & 12th | Demo of various parts of microscope functioning and care |
| 17th | Test of unit 2 |
| 18th | Thrombopoeisis |
| 7th | 19th | Definition composition and function of blood | 13th & 14th | Preparation of various anticoagulants |
| 20th | Anticoagulants |
| 21st | Definition and various types of anticoagulants |
| 8th | 22nd | Merits and demerits | 15th & 16th | Collection of venous and capillary blood |
| 23rd | Collection and preservation of blood |
| 24th | Collection of venous and capillary |
| 9th | 25th | Revision of unit 3 | 17th &18th | Preparation of stains and other reagents |
| 26th | Various equipments used for collection of blood samples |
| 27th | Safety measures at time of sampling and processing |
| 10th | 28th | Preservation of processed blood samples in hematology | 19th &20th | Preparationof peripheral blood film |
| 29th | Test of unit 3 |
| 30th | Diluting fluid (hb,tlc,platlets,rbc count) |
| 11th | 31st | Assignment -3 Uses,preparation and composition | 21st &22nd | To stain a peripheral film by Romanowsky stain |
| 32nd | Revision of unit 4 |
| 33rd | Romanowsky stains |
| 12th | 34th | Theory and preparation | 23rd & 24th | Revision of experiments |
| 35th | Choice of slide and spreader and preparation of blood film |
| 36th | Revision of unit 5 |
| 13th | 37th | Staining procedure | 25th & 26th | Doubt session |
| 38th | Test of unit 5 |
| 39th | Effects of ph on staining |
| 14th | 40th | Revision of unit 6 | 27th & 28th | VIVA |
| 41st | Test of unit 6 |
| 42nd | Revision of unit 7 |
| 15th | 43th | Doubt class of unit 1 to 3 | 29th & 30th | Revision of experiments |
| 44th | Doubt class of unit 4 to 7 |
| 45th | Revision of whole syllabus |
| 16st | 46th | Introduction to the whole syllabus of hematology-II | 31st & 32nd | Preparation of peripheral blood film. |
| 47th | **Ch – 1**Haemoglobinometery introduction |
| 48th | Formation of haemoglobin |
| 17th | 49th | Formation of haemoglobin | 33rd &34th | Preparation and standardization of stains (leishman and giemsa) |
| 50th | functions and its degradation |
| 51st | Types of haemoglobin |
| 18th | 52nd | Types of haemoglobin |  |  |
| 53rd | Various methods of estimation with specific reference to cyanmethaemoglobin method | 35th & 36th | Preparation of thick and thin blood smear |
| 54th | Ch -2 Haemocytometery introduction |
| 19th | 55th | Various counting chambers | 37th & 38th | Haemoglobin Estimation by Sahli’s method |
| 56th | Various counting chambers |
| 57th | Methods of counting of RBC their calculation and reference values |
| 20th | 58th | Methods of counting of WBC their calculation and reference values | 39th & 40th | Viva of the exrperiments performed in lab |
| 59th | Methods of counting of platelets their calculation and reference values |
| 60th | Assignment - 1Common Errors involved in haemocytometery and means to minimize them |
| 21st | 61st | Classtest -1 of the syllabus covered in the class | 41st & 42nd | Counting of RBC |
| 62nd | Ch -3 Differential leucocyte counting (DLC) |
| 63rd | Preparation and staining of blood film |
| 22nd | 64th | Performance of DLC | 43rd & 44th | Counting of WBC |
| 65th | Assignment -2 Normal values and significance of DLC |
| 66st | Blood cell morphology in health and disease (Peripheral blood film) |
| 23rd | 67th | Ch - 4 Quality Assurance in haematology- introduction and need | 45th & 46th | Revision of experiment |
| 68th | Description of precision &accuracy |
| 69th | Description of standard deviation as per national standards |
| 24th | 70th | Revision of ch- 3 | 47th &48th | Demonstration of Platelet counting |
| 71st | Revision of ch -4 |
| 72th | Classtest- 2 of ch – 3,4 |
| 25th | 73rd | Ch - 5 Automation in haematology – introduction | 49th &50th | Study of morphology of normal RBC with the help of stained slide |
| 74th | Various types of Blood cell counter |
| 75th | Various types of Blood cell counter |
| 26th | 76th | Various types of Blood cell counter | 51st &52nd | Study of morphology of normal WBC with the help of stained slide |
| 77th | Principle and operation of the automated blood cell counters |
| 78th | Principle and operation of the automated blood cell counters |
| 27th | 79th | Revision of ch -5 | 53rd & 54th | Viva of experiments |
| 80th | Class test – ch -5 |
| 81st | Revision of ch – 1 |
| 28th | 82nd | Revision of ch – 2 | 55th & 56th | To study abnormal morphology of RBC,WBC,platelets |
| 83rd | Revision test |
| 84th | Revision of ch – 3 |
| 29th | 85th | Assignment -3 (Various types of Blood cell counter) | 57th & 58th | Viva of experiments |
| 86th | Revision of ch – 4 |
| 87th | Revision test |
| 30th | 88th | Revision of ch – 5 | 59th &60th | Revision of full practical syllabus |
| 89th | Revision of full theory syllabus/Problem solving of students |
| 90th | Revision of full theory syllabus/Problem solving of students |