**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

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| **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 |
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