Lesson Plan

Name of the Faculty : Riya

Discipline : Medical Lab Technology

Year : Ist Year

Subject : Basic Chemistry

Lesson Plan : 14weeks

Work load (lecture/practical) per week (in hours) : Lectures-02, Practical-04

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| Week | Theory | Practical |
|  | Lecture Day  | Date  | Topic (including assignment + test) | Practical Day (3 hours each day \* 2 days in week) | Topic  |
| 1 | 1st  |  | Biologically important elements, study of their atomic number | 1st | Glassware Identification - different types, cleaning and preparation of cleaning solution. G1  |
| 2nd  |  |  , mass number, atomic mass, equivalent weight & molecular weight. | 2nd | Glassware Identification - different types, cleaning and preparation of cleaning solution. G2 |
| 2 | 3rd |  | Importance of Basic chemistry in medical laboratory technology. | 2nd |  Standardization, rechecking of volumetric glasswares. G1 |
| 4th  |  | Test | 3rd |  Standardization, rechecking of volumetric glasswares. G2 |
| 3 | 5th |  | Importance of Water quality and Glasswares in clinical laboratory | 4th |  Viva Voce |
| 6th |  | different types of glassware’s, use, cleaning | 5th | Determination of pH of different solutions. G1 |
| 4 | 7th |  | standardization of volumetric glassware & maintenance. | 6th | Determination of pH of different solutions. G2 |
| 8th |  | Revision | 7th | Titration of Acid and Base. G1 |
| 5 | 9th |  | Test | 8th |  Titration of Acid and Base.G2 |
| 10th |  | Pipettes - various types and different pipetting techniques. | 9th |  Viva Voce |
| 6 | 11th |  | Biochemical importance of distilled water and deionised water in clinical analysis. | 10th | Performing confirmatory tests for G1 |
| 12th |  | Test | 11th | Performing confirmatory tests for G2 |
| 7 | 13th |  | Solution and colloids – importance of colloids in biological system. Surface tension, osmosis and viscosity their importance in biological system | 12th | SEMINAR& QUIZ |
| 14th |  | Definition of organic and inorganic compounds. | 13th | Carbohydrate –Molisch G1 |
| 8 | 15th |  | Importance of organic compounds – in Biological system. | 14th | Carbohydrate –Molisch G2 |
| 16th |  | Basic chemistry of carbohydrates, proteins and lipids - Their nutritional effect in humans. biological system. | 13th | Protein- Biuret.G1 |
| 9 | 17th |  | Physiological importance of Acid & Bases and role of pH in human system. | 14th | Protein- Biuret.G2 |
| 18th |  | Oxidation and Reduction reactions –Definition. | 15th |   |
| 10 | 19th |  | Preparation of various standard solutions – definition of primary & secondary standards, SI units and their uses. | 16th | VIVA VOCE |
| 20th |  | Principles of photometry, Laws of photometry, its importance | 17th | Identification of Parts of Colorimeter & Spectrophotometer. G1 |
| 11 | 21th |  | quantification of biomolecules in micro concentration. | 18th | Identification of Parts of Colorimeter & Spectrophotometer. G2 |
| 22th |  | Principles used in determining concentration of molecules with no known weight - preparation of standard graph. | 19th |   |
| 12 | 23th  |  | Blood collection for biochemical analysis, changes occuring in blood after collection, | 20th | Preparation of different types of standards solution. G1 |
| 24th  |  | Test | 21th | Viva voce |
| 13 | 25th |  | management of its disposal. Different types of Hazards- Biological, Chemical, fire, apparatus. Safety measures needed in Basic chemistry & Bio Chemistry | 22th |  Preparation of different types of standards solution. G2 |
|  | 26th |  | Revision | 23th | VIVA VOCE |
| 14 | 27th |  | Assuring Good Laboratory Practices (GLP) in Basic chemistry. | 24th | Determination of Absorption maximum of a coloured solution. G1 |
| 28th |  | Continued | 25th | Determination of Absorption maximum of a coloured solution. G2 |