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| 1.  | 25.10.16   | 12-1 pm| CELL STRUCTURE & FUNCTIONS  
Organization of the cell  
Cytoplasmic organelles & their functions.  
Functional system of the cell. Intercellular junctions | Mrs. Suganya    |
| 2.  | 26.10.16   | 2-4 pm | ROLE PLAY                                                               |                 |
| 3.  | 27.10.16   | 12-1 pm| TISSUES  
Epithelial – Properties, types, Specializations function  
– modes of secretion, classification of glands functions.  
Connective tissue – Classification – types of cells and fibres – Brown and White adipose tissue functions, supporting tissue cartilage and bone types, properties – functions | Mr. Suresh      |
| 4.  | 28.10.16   | 12-1 pm| CONCEPT OF HOMEOSTASIS  
“Milieu interior”  
Regulation of body functions  
Feedback mechanisms | Dr. Punita      |
| 5.  | 31.10.16 & 1.11.16 | 12-1 pm| BODY FLUIDS. TOTAL BODY WATER.  
Body fluids - Volumes, Compartments, composition, Measurement of each compartment and significance.  
Concept of electroneutrality; Anion gap - unmeasured anions in plasma, Osmolarity of body fluids, Difference between tonicity and osmolarity, Starling's forces, Edema and its causes in terms of Starling's forces | Dr. EK          |
| 6.  | 2.11.16    | 2-4 pm | TRANSPORT ACROSS CELL MEMBRANE  
Active transport-Primary and secondary active transport with examples (co -transport, counter transport) Endocytosis, Pinocytosis, Phagocytosis, Exocytosis.  
Passive transport- Diffusion, Factors affecting diffusion, Bulk Flow, Osmosis. | Dr. Senthilkumar|
| 7.  | 3.11.16    | 12-1 pm| MEMBRANE POTENTIAL:  
Forces affecting movement of ions across the cell membrane – Nerst potential, Goldman equilibrium.  
Genesis of resting membrane potential, Action potential. Conduction of nerve impulse, Compound action potential. Voltage clamp technique. | Dr. Varadharaju|
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<tr>
<td>1</td>
<td>4.11.16</td>
<td>12-1 pm</td>
<td><strong>BLOOD – INTRODUCTION</strong> Composition and functions of blood</td>
<td>Dr.Sundaravadivel</td>
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<td>Plasma proteins-Normal values, functions, Plasmapheresis, Variations in Plasma Protein level</td>
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<td>2</td>
<td>7.11.16</td>
<td>12-1 pm</td>
<td><strong>RED BLOOD CELL</strong> Normal values, Morphology, Properties, Physiological and Pathological Variations in number of RBC, Variations in Size &amp; Shape of RBC, Life span &amp; fate of RBC. ESR – factors affecting and applied.</td>
<td>Dr.Archana</td>
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<td>3</td>
<td>8.11.16</td>
<td>12-1 pm</td>
<td><strong>ERYTHROPOIESIS</strong> - Definition, site of Erythropoiesis, Stages of Erythropoiesis, factors necessary for Erythropoiesis, (Erythropoiesis, maturation factors, etc.)</td>
<td>Prof.Dr.M.C</td>
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<td>4</td>
<td>9.11.16</td>
<td>2-4 pm</td>
<td><strong>HEMOGLOBIN</strong> Structure and synthesis, types, normal values, functions and variations, Hemolysis, Fragility of RBCs, Jaundice, PCV, Blood Indices <strong>Anaemia</strong> - Classification (Morphological and Etiological), Symptoms of Anaemia &amp; treatment. <strong>Polycythemias</strong>.</td>
<td>Dr.EK</td>
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<td>5</td>
<td>10.11.16</td>
<td>12-1 pm</td>
<td><strong>White Blood Cell</strong> Morphology of WBC, Normal count of WBC physiological and pathological variations in WBC count, properties and functions of WBC</td>
<td>Dr.Punita</td>
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<td>6</td>
<td>11.11.16</td>
<td>12-1 pm</td>
<td><strong>LEUKOPOIESIS, SPLEEN</strong> Structure, functions, Hypersplenism, Reticulo endothelial system (Fixed and Wandering Endothelial cells), functions of RES</td>
<td>Mrs.Suganya</td>
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<td>7</td>
<td>14.11.16</td>
<td>12-1 pm</td>
<td><strong>IMMUNITY</strong> Innate &amp; Acquired immunity, <strong>Cell mediated Immunity</strong> Development, role of Helper T cells, Suppressor T cells, NK cell, Role of Memory cells Cytokines HLA system, Transplant rejection, Immune deficiency disorders congenital Acquired (AIDS)</td>
<td>Dr.Senthil</td>
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<td>Lecturer</td>
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| 8     | 15.11.16   | 12-1 pm | **HUMORAL IMMUNITY**  
Antibody Types, Structure of Antibodies, Functions of Antibodies, Mechanism of action of Antibodies (Direct action, Actions through complement system-Classical and Alternate pathway). Autoimmune diseases  
DM, Myasthenia gravis, Allergy and Immunological hypersensitivity reactions | Dr. Senthil        |
| 9     | 16.11.16   | 2-3 pm  | **BLOOD GROUPS**  
Types, agglutinins, agglutinogens  
Landsteiner’s law, Cross matching, Erythroblastosis fetalis, Blood transfusion and Transfusion reactions, Importance of Blood Grouping | Dr. Varadaraju     |
| 10    | 16.11.16   | 3-4 pm  | **PLATELETS**  
Structure and composition, Normal count-Physiological and pathological variations, functions, development and lifespan. Role in Hemostasis. | Prof. M.C / Mr. Suresh |
| 11    | 17.11.16 & 18.11.16 | 12-1 pm | **COAGULATION OF BLOOD**  
Hemostasis – Definition, Stages of Hemostasis  
Factors involved  
Mechanism of Coagulation, clot retraction, fibrinolysis  
**ANTICOAGULANTS**  
Tests for Coagulation  
Heparin coumarin derivatives (vivo /vivo-uses)  
Bleeding disorders-Congenital (Haemophilia, Christmas disease)  
Acquired-Vitamin K deficiency - Liver disease Purpura, Von Willebrand Disease, Thrombosis | Prof. M.C          |
| 12    | 21.11.16   |         | **LYMPH**  
Formation and composition of lymph, Types of lymphatics, Lymphatic circulation, functions of lymph, applied aspects (Lymphedema, filariasis, Ca Breast with upper arm edema) | Dr. Sundaravadivel |