Dr. D. Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune 18

DEPARTMENT OF PHYSIOLOGY

Lesson plan schedule for **tutorials** I/II MBBS Regular batch (2017 – 2018)

Sr. No.	Date	Topic	Lesson Plan	Name of the faculty member
1	05/10/17 To 07/10/17	Transport across cell membrane	Transport across the cell membrane 1) Body Fluid Compartments 2) Composition of ECF and ICF 3) Classification of Transport Mechanisms I) Passive Transport mechanisms A) Diffusion - Definition Types a) Simple Diffusion - definition Examples of each & characteristics of simple diffusion through lipid bilayer & protein channels b) Facilitated Diffusion-definition & its characteristics & example. Factors affecting rate of diffusion- c) Filtration d) Dialysis Other Passive Transport Mechanisms II) Active transport mechanisms Definition , Types- a)Primary Active Transport - Definition Examples – Na+- K+ pump –Diagram, explanation & functions, Ca pump, proton pump. b) Secondary Active Transport- Definition Types- i) Co-transport – Diagram with examples ii) Counter-transport - Diagram with examples 4) Transport through the cellular sheet 5) Other transport- a) Endocytosis– Pinocytosis , Phagocytosis b) Exocytosis	Dr. V.G. Jaltade Dr. M.S. Karandikar Dr. R. S. Sood Dr. Neelam Prasad Dr. P. D. Khuje Dr. S. S. Jadhav
2	12/10/17 To 14/10/17	Immunity	Definition and Necessity 2) Classification 3) Importance of lymphoid tissue 4) Development of immune system 5) Specificity of immune system 6) Mechanism of tolerance	Dr. V. G. Jaltade Dr. M.S. Karandikar Dr. R. S. Sood Dr. Neelam Prasad Dr. P. D. Khuje Dr. S. S. Jadhav

			7) Cellular immunity 8) Mechanism of action of sensitized T cell. 9) Humoral immunity 10) Formation of immunoglobulin – Steps. 11) Different types – IgA, IgD, IgG, IgE, IgM. 12) Structure of immunoglobulin 13) Mechanism of action of immunoglobulin 14) Activation of complement – cascade reaction , amplification. 15) Primary & secondary response 16) Immunization a) Active b) Passive 17) Harmful immune response 18) Differences between cellular & humoral immunity.	
3	02/11/17 03/11/17 & 06/11/17	Molecular basis of muscle contraction	1) Steps involved in crossbridge cycling leading to contraction of Muscle. 2) Sliding filament theory for muscle contraction Walk along theory of muscle contraction : Ratchet theory of muscle contraction: 3) Role of ATP in Muscle contraction: 4) Relaxation 5) Applied Electrical changes , Mechanical changes , Thermal changes , Chemical changes , Oxygen debt , Efficiency of muscle , Properties of muscle , A comparison of skeletal cardiac & smooth muscle.	Dr. N. G. Borade Dr. V. G. Jaltade Dr. M.S. Karandikar Dr. R. S. Sood Dr. Neelam Prasad Dr. P. D. Khuje Dr. S. S. Jadhav

Dr. (Mrs.) N. G. Borade
Prof. & HOD