

الخطة الدراسية

العام الدراسي (2020-2021)

القسم : تقنيات المختبرات الطبية الكلية : التقنيات الصحية والطبية

الثانية	المرحلة الدراسية
الفسلجة البشرية	اسم المادة الدراسية باللغة العربية
Physiology	اسم المادة الدراسية باللغة الانكليزية
اهداف المادة : تعريف الطالب بمكونات الخلايا الجسمية ومكونات الدم المختلفة لتمكن الطالب من التهيؤ لممارسة عمله في المستقبل.	اهداف المادة
علم الوظائف (الفسلوجي) :- بأنه ذلك الفرع من العلوم الحيوية الذي يتعامل مع الوظائف الكاملة للأعضاء المختلفة للجسم وهي بكامل صحتها ويؤكد على التغيرات التي تطرأ على الجسم بأكمله عند نشاط وعمل هذه الأعضاء أثناء قيامها بفعاليتها الأساسية والتحري عن سبب وكيفية أنجاز تلك الوظائف الحيوية الضرورية لإدامة حياة الكائن الحي . أما أبسط تعريف يمكن أن ينطبق على الفسلجة :- هو علم وظائف الكائنات الحية أو دراسة وظائف جميع أعضاء الجسم .	وصف المادة
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Week	Topics (theory 2hrs – practical 4 hrs)
1 st	General Introduction to Physiology Cell Physiology: General Functions, Cell Membrane Transport
2 nd	General Idea about Body fluids: Types, Composition, and Functions. Unit of Measurement, Conversion and Conversion factor.
3 ^{ed}	Blood: Composition, Specific Functions of each Compartment. Plasma and Serum Differences and Separation.
4 th	RBCs: Definition, Structure, and Normal Value; Hb Definition, Structure, and Normal Value; Blood Groups.
5 th	Erythropoiesis, Homeostasis, Death and Disposal.
6 th	White Blood Cells: Classification, Specific Function, Normal Value.
7 th	Platelet: Definition, Function, Normal Value, Thrombopoiesis and Hemostasis.
8 th	Heart Physiology: Conductive System, Cardiac Output (Mechanics and Control), and Factor Affecting.
9 th & 10 th	Vascular (Blood Vessels) Physiology: Mechanics and Control; Blood Pressure; and Factor Affecting.
11 th	Lymphatic Physiology: Organs: Composition, Function of Each part. Lymph: Structure, Hemodynamic and Factor Affecting their Movement.
12 th	Respiratory Physiology: Parts and Specific Functions; Ventilation: Mechanics and Control.
13 th	External Respiration, Gas Blood Transport, Internal Respiration: Mechanics, Control and Factor affecting.
14 th	Lung Volumes: Normal Values and Factor Affecting; Conscious and Un-Conscious Control of Respiration. Role of Pons and Medulla in Respiratory Transient.
15 th	Acid-Base Balance: Definition, Buffer Systems, and Role of Body Systems In the Regulation.
16 th	Digestive Physiology: GIT: Part General Function, Food Movement, and Control. Swallowing Reflex

17 th	Digestive Physiology: GIT Chemical Digestion, Absorption, and Control. Defecation Reflex
18 th	Digestive Physiology: Accessory Organs: Secretion and Their Role in Digestion. Secretion Control.
19 th	Urinary Physiology: General Functions of US. Urine: Definition and Normal Constitute. Physical and Chemical Property of Urine.
20 th	Role of Kidney in Urine Formation and Maintenance of Body Fluids and The Role In Acid-Base Balance.
21	Urinary Tract: Parts and Function. Urine Hemodynamic and Control. Normal Urine Daily Volume and Factor Affecting.
22	Endocrine Physiology: Endocrine Glands Types and Secretion. Hormone: Types, Normal Value, Function and Control of Secretion.
23	Reproductive Physiology: Male Sex Physiology:Function of Genital Organs. Male Sex Hormones: Normal Value, Production, Control, and Their Role in Reproduction.
24	Female Sex Physiology: Function of Genital Organs. Normal Value of Female Sex Hormone, Production, and Control. Female Cycle, Pregnancy, Parturition, and Lactation: Hormonal Fluctuation and Control.
25	Muscles Physiology: Types and Functions. Generation of Action Potential, Contraction, and Sliding-Filament theory.
26	Nervous Physiology: Neuroglia: Definition, Types, and Function. Neurons: Definition, Types, and Function. CSF: Composition, Function, and Clinical Importance
27	Generation of Action Potential. Neuronal Conduction: Types and Speed. Synapsis: Types, and Function.

28	CNS: Parts and Functions
29	Spinal Cord: Parts, General Functions, and Spinal Reflexes. PNS: Types and Function.
30	Sensory System: Classification and General Function. Special Sense Organs: Types and General Function

المفردات العملية

Week	Topics Covered
1	Introduction: Characteristics of good technician. How To avoid contamination of Specimen and Technician.
2	Specimen: Type, Collection, and Preparation. Specimen identification Lab Reports: Types and righting
3	Basic steps for drawing a blood specimen by venipuncture. Complications of venipuncture. Blood collection by skin punctures (Capillary Blood). Types of Syringes used in blood collection. Patient care after blood collection.
4	Repeat: Blood drawing.
5	Blood sample Hemolysis: Reasons and how to avoid. Blood Coagulants: Types and Uses. (EDTA, Citrate, Oxalate, Heparin, sodium fluoride).
6	Specimen rejection: Reason and How to avoid. Type of anticoagulant used and their effect on Blood Cell Morphology.
7	Blood separation to Cells, plasma, and serum. Transport, and storage blood sample
8	Blood Smear: Preparation and Importance.
9	PCV
10	Complete Blood Counts: RBCs. Manual and Electronic Method.
11	Complete Blood Counts: WBCs. Manual and Electronic Method.
12	Repeat: Blood Cells Count
13	Determination of Hemoglobin: Cyanmethemoglobin Method
14	Determination of Hemoglobin: Electronic Method
15	Repeat
16	Urine Sample: Importance, Method of Collection, Preparation, Transport and Storage Physical Examination of Urine Sample.
17	Microscopic Examination of Urine: The identification of Epithelial Cells, Blood Cells, crystals, casts, etc.
18	Microscopic Examination of Urine: The identification of Bacteria, Yeast, Mucus, Casts, Etc.
19	Repeat
20	Chemical Examination of Urine
21	Repeated
22	Semen Analysis: Type of Collection & Physical Examination
23	Semen Analysis: Cell Counting Technique.
24	Semen Analysis: Motility, Viability, & Morphology.
25	Repeat Semen Analysis.
26	Stethoscope and its uses.
27	Blood Pressure
28	Repeated
29	ESC
30	Body Temperature

2016 لعام 13 المصادر: Guyton and Hall Textbook of Medical Physiology 13 ed

المراجع: الاطلس العملي فسيولوجيا الانسان

المراجع المساعد: practical physiology 5 ed