

Name of Course	Anatomy and Physiology (Practical)
Marks	100 (20 + 80) Marks
Introduction	<p>Anatomy and Physiology is an important course of study for anyone interested in the medical field. The study of anatomy involves the understanding of the structure of the human body, while physiology is concerned with the functions and processes of the body.</p> <p>In this course, students will learn about the various systems of the body including the circulatory, respiratory, digestive, urinary, and nervous systems. They will also study the structure and function of the skin and the special senses such as hearing and sight.</p> <p>Additionally, students will be introduced to anatomical terminologies, surface anatomy, and the structure of cells and tissues. They will gain knowledge about the composition of blood, blood coagulation, and the role of the circulatory system in transporting oxygen and nutrients to the body's tissues.</p> <p>The course will also cover the mechanisms of respiration, urine formation, and the functions of the liver and gall bladder. Students will learn about the general introduction to the nervous and muscular systems and the nature and function of hormones in endocrinology. By the end of this course, students will have a strong foundation in the anatomy and physiology of the human body, preparing them for further study in the medical field.</p>
Learning Outcome	<p>The learning outcomes for Anatomy and Physiology can be categorized into three domains: cognitive, psychomotor, and affective.</p> <p><i>Cognitive Domain (Knowledge)</i></p> <ul style="list-style-type: none"> • Describe the major organs, systems, and structures of the human body • Explain the functions and interactions of different organs and systems • Identify and apply anatomical and physiological terminology • Understand the composition, functions, and characteristics of blood, circulatory system, respiratory system, digestive system, urinary system, nervous and muscular system, and endocrinology • Understand the mechanisms of respiration and ventilation • Understand the basics of skin structure and its role in regulating body temperature • Explain how the special senses of the body work and their functions <p><i>Psychomotor Domain (Skills)</i></p> <ul style="list-style-type: none"> • Demonstrate knowledge and skills in identifying different anatomical structures and organs • Perform basic anatomical dissections and understand the functions of different organs • Conduct laboratory experiments and interpret the results • Demonstrate knowledge and skills in using various medical terminologies • Demonstrate knowledge and skills in using medical instruments <p><i>Affective Domain (Attitudes and Values)</i></p> <ul style="list-style-type: none"> • Develop a deeper appreciation and respect for the complexity of the human body • Develop a sense of responsibility towards maintaining personal health and wellness • Appreciate the importance of scientific inquiry and research in improving human health • Demonstrate effective communication skills in discussing medical issues with colleagues and patients.

Curriculum

ANATOMY

- i) Study of Human Skeleton
- ii) Histological Examination of Slides: Epithelium, Connective Tissues and Muscles

PHYSIOLOGY

Blood

- i) Determination of Haemoglobin (Hb)
- ii) Determination of E.S.R.
- iii) R.B.C. Count.
- iv) W.B.C. Count.
- v) D.L.C. (Differential Leucocyte Count).
- vi) Bleeding Time.
- vii) Coagulation Time.
- viii) Blood groups.

Respiration:

- i) Determination of Tidal volume.
- ii) Demonstration of Artificial Respiration.

C.V.S.

- i) Recording of Arterial Pulse.
- ii) Recording of Arterial Blood Pressure.
- iii) Electro-cardiogram.

Eye

- i) Visual and Acuity for far vision and near vision.
- ii) Field of vision (Perimetry).

Name of Course	Anatomy and Physiology (Written)
Marks	100 Marks (20 + 80 Marks)
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Learning Outcome	<p>The learning outcomes for Anatomy and Physiology can be categorized into three domains: cognitive, psychomotor, and affective.</p> <p><i>Cognitive Domain (Knowledge)</i></p> <ul style="list-style-type: none"> • Describe the major organs, systems, and structures of the human body • Explain the functions and interactions of different organs and systems • Identify and apply anatomical and physiological terminology • Understand the composition, functions, and characteristics of blood, circulatory system, respiratory system, digestive system, urinary system, nervous and muscular system, and endocrinology • Understand the mechanisms of respiration and ventilation • Understand the basics of skin structure and its role in regulating body temperature • Explain how the special senses of the body work and their functions <p><i>Psychomotor Domain (Skills)</i></p> <ul style="list-style-type: none"> • Demonstrate knowledge and skills in identifying different anatomical structures and organs • Perform basic anatomical dissections and understand the functions of different organs • Conduct laboratory experiments and interpret the results • Demonstrate knowledge and skills in using various medical terminologies • Demonstrate knowledge and skills in using medical instruments <p><i>Affective Domain (Attitudes and Values)</i></p> <ul style="list-style-type: none"> • Develop a deeper appreciation and respect for the complexity of the human body • Develop a sense of responsibility towards maintaining personal health and wellness • Appreciate the importance of scientific inquiry and research in improving human health • Demonstrate effective communication skills in discussing medical issues with colleagues and patients.

Curriculum

1. ANATOMY
 - a. Introduction to Anatomy
 - b. Anatomical Terminologies
 - c. Surface Anatomy
2. PHYSIOLOGY
 - a. Introduction to Physiology
 - b. Structure of Cell and Tissues of the Body
 - i. Bone Structure, Types of Bones and Joints
 - ii. Muscles (Structure of Skeletal, Smooth & Cardiac Muscle)
3. BLOOD: Composition of blood (RBC, WBC and Platelets), Fate of Red Blood cells, Blood groups, Rh factors, E.S.R. Blood coagulation, Anaemias.
4. CIRCULATORY SYSTEM: Properties of the cardiac muscle. Heart beat. Cardiac cycle. ECG. Blood pressure. Pulse. Haemorrhage. Lymph.
5. RESPIRATORY SYSTEM: Mechanics of respiration. Pulmonary ventilation. Lungs volume and capacities. Carriage of O₂ and CO₂ by the blood. Regulation of breathing (Nervous & Chemical control).
6. SKIN: Structure, Functions of skin, Temperature regulation by Skin.
7. DIGESTIVE SYSTEM: Introduction to Digestive juices-saliva, Gastric juice, pancreatic juice, Bile and intestinal juices; their composition. Movements of the stomach and intestines. Functions of liver and gall bladder.
8. URINARY SYSTEM: Urine formation and composition of urine.
9. PHYSIOLOGY OF NERVE AND MUSCLE: General introduction to Nervous and Muscular system.
10. NERVOUS SYSTEM: General introduction to Nervous and Muscular system.
11. SPECIAL SENSE: Introductory knowledge of structure and functions of the special senses.
12. ENDOCRINOLOGY: Definition of Hormone. Nature, Function and action of Hormone.