

JINAN UNIVERSITY		جامعة الجنان
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Member of the Arab Universities Association Member of the Islamic Universities Association		عضو اتحاد الجامعات العربية عضو رابطة الجامعات الإسلامية
Tripoli - Lebanon		طرابلس - لبنان
Faculty of Public Health		كلية الصحة العامة

Biology Entrance Exam

DESCRIPTION:

This exam is designed for the students willing to enroll in the faculty of public health. If they pass this exam with at least 60% they can directly register the General Biology course (PHE131) if they failed to pass they should register the Remedial Biology course (Bio010) that introduce them to key biological concepts fundamental to animal biology.

CONTENTS:

A. Basic mechanisms of cell division and sexual reproduction

- Diploid and Haploid cells (Chromosomes, Karyotype)
- Mitosis and Meiosis
- Spermatogenesis
- Oogenesis
- Fertilization

B. Transmission of genes and genetic recombination

- Mendelian genetics
- Transmission of allelic genes
- Genetic recombination

C. The immune system

- The lymphatic system
- HLA system
- Blood Groups
- Cells of the immune system
- The immune response
- Immunological memory

- Disorders of the immune system:
 - i. Immunodeficiency
 - ii. Hypersensitivity
 - iii. Autoimmune diseases

D. Neurophysiology

- Function of neurons:
 - i. Resting potential
 - ii. Action potential
 - iii. Sensory receptor and nerve impulses
- Synapses, structure and function
- Organization of the human encephalon
- Functions of the cerebral cortex
- Neurotransmitters
- Disorders of the nervous system

E. Systems of regulation

- Regulation of glycemia:
 - the effector organs
 - Hypo/hyperglycemic systems
 - Diabetes
- Regulation of arterial blood pressure

TEXTBOOK:

- “Life science” National Textbook for the life sciences section in third year secondary education.