

***I) Human Reproduction**

1-The reproductive function for Man

- **Sex cells** •
 - Structure of the sperm cell
 - The spermatogenesis
- **The testosterone**
 - Origin
 - Biological effects
- **Regulation of the reproductive function for Man by the complex of hypothalamo-hypophysaire**

2-The feminine reproductive function.

- **Sex cells**
 - The follicular – genesis
 - The ovogenesis
 - Structure of the ovocyte
- **The sexual cycle for women**
 - Ovarian Cycle
 - uterine cycle,
 - Hormonal cycle
- **Role of the female sex hormones**
- **Regulation of the sexual cycle by the complex of hypothalamo-hypophysaire**

3-The reproduction

- *Conditions and stages of the fertilization.*
- *Nesting and role of the placenta*
- *Control of the reproduction*
 - The contraception by the combined pill

II-Genetics

1-The admixture of the genetic information

2-Transmission of two alleles couples with diploids

- Independence Case
- Case of genetic link

3-human Genetics

- **Heredity**
 - Autosomal Heredity I: case of an alleles couple
 - Heredity connected to sex: case of an alleles couple
- **Risks of the consanguinity**
- **Antenatal Diagnosis**
 - Screening of abnormalities of the cerotype
 - Screening of gene abnormalities
 - Use of the molecular probe

III-Evolution

1-Phylogeny of species

2-Mechanisms of the evolution: Transformations and natural selection

IV-Neurophysiology

1-The nerve tissue

2-The mitotic reflex

- The histological elements which intervene in the reflex

- The neural message:

- The potential of rest
- The potential of action
- The transduction and the coding of the intensity of the stimulus
- The distribution of the neural message
- The synaptic transmission
- triggering synapses and inhibitive synapses
- Post-synaptic Integration

3-Functioning of a driving effector:

- **The scrawny muscle - neuromuscular Transmission**
- **Mechanism of the muscular contraction**

4-Regulation of the blood pressure

V-Immunity: preservation of the integrity of the body

- 1-The ego and non-ego
- 2-Immunity with humeral mediation and immunity with cellular mediation
- 3-The stages of the specific immunizing answer
- 4-Dysfunction of the immune system: AIDS