

HBA SEMESTER 1, UNIT 1 EXAM NOTES (2013)

INTRODUCTION TO THE HUMAN BODY (Lecture 1)

Qu. Define anatomy and physiology

- Anatomy: The study of structure
- Physiology: The study of function

Qu. What are the subdivisions of anatomy?

1. Gross/macroscopic (thing that can be seen): regional, surface and systemic anatomy
2. Microscopic (things that are too small to be seen): cytology and histology
3. Developmental: embryology

Qu. What are the subdivisions of physiology?

- It's based on organ systems. Eg. Renal or cardiovascular physiology
- Focuses on the cellular or molecular level → chemical rxns in cells
- Based on principles of chemistry and physics

Qu. List the 8 levels of structural organization in order

1. Atoms
2. Molecules
3. Organelles
4. Cells
5. Tissues
6. Organs
7. Organ systems
8. Organism

Qu. What do all cells depend on to meet their survival needs?

- Organ systems

ORGAN SYSTEMS (Lecture 1)

Qu. Name 11 organ systems in the body

1. Integumentary
2. Skeletal
3. Muscular
4. Nervous
5. Endocrine
6. Cardiovascular

7. Lymphatic
8. Respiratory
9. Digestive
10. Urinary/renal
11. Reproductive

Qu. What does the INTEGUMENTARY SYSTEM do?

<ol style="list-style-type: none"> 1. Forms the external body covering (skin) 2. Protects deeper tissues from injury 3. Synthesizes vitamin D 4. Houses cutaneous receptors (pain, pressures...etc) and sweat glands and oil glands 	<ul style="list-style-type: none"> ✓ Skin ✓ Hair ✓ Nails
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Qu. What does the SKELETAL SYSTEM do?

<ol style="list-style-type: none"> 1. Provides structural framework for the muscles to cause movement 2. Protects and supports body organs 3. Blood cells are formed within bones 4. Bones store minerals 	<ul style="list-style-type: none"> ✓ All bones ✓ Tissues: tendons, ligaments and cartilage ✓ Teeth
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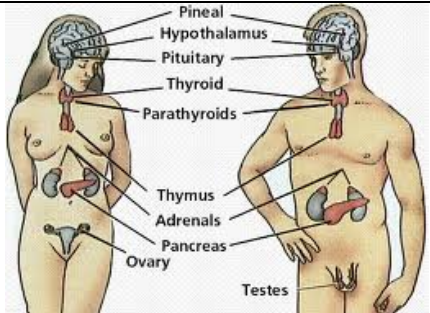
Qu. What does the MUSCULAR SYSTEM do?

<ol style="list-style-type: none"> 1. Allows manipulation of the environment 2. Locomotion and facial expressions 3. Produces body heat 4. Maintains posture 	<ul style="list-style-type: none"> ✓ Skeletal, smooth and cardiac muscles
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Qu. What does the NERVOUS SYSTEM do?

<ol style="list-style-type: none"> 1. Fast acting control system of the body 2. Responds to internal and external changes by activating the necessary muscles and glands 3. Rapid, specific communication with immediate responses (unlike the endocrine system when it secretes hormones) 4. Regulates internal functions and controls human behaviour 	<p>CNS:</p> <ul style="list-style-type: none"> ✓ Brain ✓ Spinal cord <p>PNS:</p> <ul style="list-style-type: none"> ✓ Nerve cells (neurons) ✓ Neuroglia (glial cells)
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Qu. What does the ENDOCRINE SYSTEM do?

<ol style="list-style-type: none"> 1. Glands secrete hormones 2. Regulates: - growth - reproduction - metabolism (nutrient use) 	
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