Deakin College – Week 5
Revision for Mid Semester Test

All Topics/Many Topics
- What countercurrent exchange is and how it works.

Topic One – Introduction to Animals
- List the taxonomic levels
- Know the correct way to write or type a scientific name

Topic Two – Animal Diversity
- What are the different phyla, what are their main characteristics and what common animals belong to each phyla.

Topic Two – Animal Development
- What types of tissues develop from the ectoderm, endoderm and mesoderm?
- What does the archenteron eventually develop into in vertebrates?
- Know the steps involved in the fertilization of a sea urchin and mammalian egg.

Topic Four – Cells Tissues and Organs
- Know and recognize the different types of cells that exist in animals
- Know their properties and where they would be found in the body.
- Know what tissues make up an organ

Topic Five – Circulatory systems
- In which artery/vein is blood pressure the highest? Lowest?
- How is blood pressure measured and what is the difference between diastolic and systolic pressure
- Know the difference between open and closed circulatory systems
- How does the body change the flow of blood to particular tissues?
- What is the sinoatrial node and what does it control in humans?

Topic Six – Respiratory systems
- Know the steps involved in what happens when we breathe
- Know the steps involved in what happens to oxygen as it is transferred into a red blood cell
- Know how CO_2 is transported within the blood
- Know how tracheal systems work and what organisms use this form of gas exchange.
- What do all respiratory surfaces have in common?

Topic Seven – Regulation of internal environment.
- What is the difference between and endotherm and ectotherms?
- What is the difference between an osmoregulator and osmoconformer?
- Know about the different types of nitrogenous wastes and their advantages/disadvantages
- Know the steps involved in how urea is extracted from the mammalian kidney and the names of the different parts of a nephron
- How do animals get rid of excess heat?

Topic One – The Endocrine System
- What is a target cell?
- Know the difference between steroid and non steroid hormones
- Why do differing tissues have differing responses to the same hormone?
- Know the negative feedback system controlled by insulin and glucagon.

Term	Function/Definition/Notes
asymmetrical	
Radial symmetry	
Bilateral symmetry	
cephalization	
exoskeleton	
parapodia	
Epithelium	
Simple squamous epithelium	
Simple cuboidial epithelium	
Simple columnar epithelium	
Stratified squamous epithelium	
Pseudo stratified epithelium	
Muscle	

Term	Function/Definition/Notes
Skeletal muscle	
Cardiac Muscle	
Smooth Muscle	
Nervous tissue	
Connective Tissue	
Cartilage	
Bone	
Blood	
Adipose Tissue	
Fibrous Connective Tissue (Tendons)	
Loose Connective Tissue (beneath skin and between organs	
Fertilisation	

Term	Function/Definition/Notes
cleavage	
Blastocoel	
Blastula	
Archenteron	
Organogenisis	
Gastrulation	
Systolic pressure	
Fertilisation	
Acrosomal reaction	
Cortical reactions	

Term	Function/Definition/Notes
Countercurrent exchange	
Blood Pressure	
Systolic pressure	
Diastolic pressure	
SA node	
AV node	
Erythrocytes	
Leucocytes	
Platelets	
Cardiac Output	
List the 4 Gas exchange structures	

Term	Function/Definition/Notes
Conformer	
Regulator	
Endotherm	
Ectotherm	
osmoconformer	
Osmoregulator	
Tracheal repiratory system	
Homeostatsis	
Hyperosmotic	
Hypoosmotic	
Isoosmotic	
Negative feedback system	
Positive Feedback system	

Term	Function/Definition/Notes
Steroid Hormone	
Non steroid hormone	
anterior pituitary	
Posterior Pituitary	
Hypothalamus	
Pancreas	
Insulin	
Glucagon	

List the similarities and differnces between open and closed circulatory systems

Open Circulatory systems	Close Circulatory Systems

Compare the three types of nitrogenous wastes including their advantages, disadvantages and the types of animals that use each type

Ammonia	Urea	Uric Acid

Label the diagrams below as either single closed circulatory systems, double circulatory system with 3 chambered heart or double circulatory system with 4 chambered heart. Which would you find in a fish? Frog? Mammal?

Gill capillaries

Artery — **Gill circulation**

Heart { Ventricle — , Atrium — }

Vein — **Systemic circulation**

Systemic capillaries

Lung capillaries

Right systemic aorta — **Pulmonary circuit**

A — , A —
V — , V — Left systemic aorta
Right , Left

Systemic capillaries

Lung capillaries

Pulmonary circuit

A — , A —
V — , V —
Right , Left

Systemic circuit

Systemic capillaries