Ch 44

Osmoregulation:

Osmosis:

Osmolarity:

Osmotic challenges (**fig 44.2**)

Osmoconformer:

Osmoregulator:

Stenohaline:

Euryhaline:

Marine fish – (**fig 44.3**)

Freshwater fish –(**fig 44.3**)

Land animals: (**fig 44.5**)

Adaptations:

Transport epithelia (**fig 44.7**)

(**fig 44.7**)

Nitrogenous waste (**fig 44.8**)

Ammonia:

Urea:

Uric acid:

Excretory process (**fig 44.9**)

Filtration:

Hydrostatic pressure

Selective reabsorption:

Secretion:

Types of excretory systems

Protonephridia: (**fig 44.10**)

Flame bulb

Cap cell

Metanephridia: (**fig 44.11**)

Nephrostome:

Collecting tubule

Bladder:

Malpighian tubules: (**fig 44.12**)

Mammalian excretory system (**fig 44.13a**)

Kidney:

Renal artery:

Renal vein:

Ureter:

Urinary bladder:

Urethra:

Mammalian kidney (**fig 44.13b**)

Renal cortex:

Renal medulla:

Renal pelvis:

Ureter:

Nephron: (**fig 44.13c**)

Nephron:

Juxtamedullary nephron:

Cortical nephron:

(**fig 44.13d**)

Glomerulus:

Bowman’s capsule:

Proximal tubule:

Descending loop of Henle:

Ascending loop of Henle:

Entire loop of Henle:

Distal tubule:

Collecting duct:

**Fig 44.15**

Blood vessels: (**fig 44.13a & d**)

Afferent arterioles:

Efferent arterioles:

Peritubular capillaries:

Vasa recta:

Regulation of the Kidney

Antidiuretic hormone (ADH):

Angiotensin II:

Renin:

Aldosterone

Renin-angiotensin-aldosterone system (RAAS) (**fig 44.16b**)

Atrial natriuretic factor (ANF)