**STUDY QUESTIONS URINARY SYSTEM**

**VOCABULARY**

Filtration Podocytes Juxtaglomerular apparatus

Glomerulus Filtration slits Macula densa

Afferent arteriole Parietal epithelium Renin

Efferent arteriole Mesangial cells Osmotic gradient

Fenestrated capillaries Proximal convoluted tubule Collecting tubules

Bowman’s capsule Loop of Henle Peritubular capillaries

Visceral epithelium Distal convoluted tubule Vasa recta

Calyces Renal Pelvis Transitional epithelium

**OBJECTIVES AND QUESTIONS**

1. Describe the various functions of the kidneys (at least 5).
2. Describe the flow of blood through the kidney and the importance of the arterial portal system.
3. Describe the 3 barriers to filtration in the glomerulus.
4. Fill in the following table describing the regions of the nephron.

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| --- | --- | --- | --- |
| Region | Histological features | Locations | Major functions |
| Proximal convoluted tubule |  |  |  |
| Thin descending loop of Henle |  |  |  |
| Thin ascending loop of Henle |  |  |  |
| Thick ascending loop of Henle |  |  |  |
| Distal convoluted tubule |  |  |  |
| Collecting duct principal cells |  |  |  |
| Collecting duct intercalated cells |  |  |  |