**Animal Nutrition**:

Ch 41

 Animalia:

 :**(Fig 41.26)**

 Herbivore:

 Carnivore:

 Omnivore:

 Diet must obtain:

 Feeding mechanisms: **(Fig 41.2)**

 Suspension feeders:

 Substrate feeders:

 Fluid feeders:

 Bulk feeders:

**Homeostatic mechanisms**:

 **(Fig 41.3)**

 Calorie balance:

 Undernourished:

 Overnourished:

 Malnourished:

 Obesity:

 Hormones: **(Fig 41.5)**

 Leptin:

 Ghrelin:

 PYY:

 Insulin:

 Evolution

**Carbon skeleton**:

 Essential amino acids:

 Essential fatty acids:

 Vitamins

 Minerals

 Table 41.2

**Processing food**: **(Fig 41.12)**

 Ingestion:

 Digestion:

 Mechanical digestion:

 Chemical digestion:

 Absorption:

 Elimination:

 Intracellular digestion:

 Extracellular digestion

 Alimentary canal: **(Fig 41.14)**

Gastrovascular cavity **(Fig 41.13)**

**Mammalian digestive system**: **(Fig 41.15)**

 Peristalsis:

 Sphincters:

 Accessory organs:

From mouth to stomach: **(Fig 41.16)**

 Oral cavity:

 Oral sphincter:

 Tongue:

 Teeth:

 Salivary gland:

 Salivary amylase:

 Pharynx:

 Epiglottis:

 Esophagus:

Stomach: (Fig 41.17)

 Gastric gland:

 Mucus cells:

 Parietal cells:

 Chief cells:

 Pyloric sphincter:

Stomach to colon:

 Small intestine:

 Duodenum:

 Jejunum

 (Fig 41.21)

 Ileum:

Nutrient absorption: **(Fig 41.23)**

 Villi:

 Lacteal:

 Microvilli:

 **Fig 41.23**

Fig 41.21

From large intestine to exit

 Ileocecal sphincter:

 Cecum: **(Fig 41.27, 15)**

 Herbivores:

 Carnivores:

 Omnivores:

 **(fig 41.15)**

 Colon:

 Sections:

 Feces:

 Rectum:

**Hormonal control**: **(Fig 41.22)**

 Cholecystokinin: (CKK)

 Gastrin:

 Secretin:

 Enterogastrone: