- 26. Compare and contrast the ribosomes of prokaryotes and eukaryotes.
  - eukaryotes have larger ribosomes than prokaryotes •
- 27. List and describe the three filaments of a eukaryotic cytoskeleton.
  - tubulin microtubules •
  - microfilaments are composed of actin
  - intermediate filaments contain various proteins •
- 28. Discuss the function of each of the following membranous organelles:
- 29. Describe the endosymbiont theory of the origin of mitochondria, chloroplasts, and eukaryotic cells.
  - Eukaryotes form from union of small aerobic prokaryotes with larger anaerobic prokaryotes.
  - Aerobic cells provide organelles and anaerobic cells becomes dependent host
  - Aerobic prokaryote become mitochondria, and its cytoplasmic membrane become cristae
  - chloroplasts origin from phagocytized photosynthetic prokaryotes
- *30. List evidence for the endosymbiont theory.*
- preview from A of A page 4 of A • possess two bilipid membranes around these organelles

Nucleus "Control center" of the cell Endoplasmic Transport within the cell, lipid synthesis reticulum Golai bodies Exocytosis, secretion Lysosomes Breakdown of nutrients, self-destruction damaged or aged cells Peroxisomes Neutralization of toxins Vacuoles Storage Vesicles Storage, digestion, transport Mitochondria Aerobic ATP production Chloroplasts Photosynthesis