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2. (a) **Mitochondria:** It provides energy for all the activities. The energy is produced by the oxidation of food (respiration). Thus, they are often called power houses of the cell.
- (b) **Cell membrane:** It is selectively permeable membrane, i.e., it allows the entry and exit of only selected substances. It also provides an outer boundary to the cell and separates cells from one another and also from the surrounding medium.
- (c) **Vacuole:** It stores soluble food, wastes and secretions of cell dissolved in water as cell sap.
- (d) **Ribosome:** It is the site of protein synthesis.
- (e) **Nucleus:** It controls all the metabolic activities of the cell. It is also responsible for passing genetic characteristics from parents to the offspring.

4. **NOTE:** (i) In animal cells, the cell membrane is the outer boundary of the cell.