

A. Definition: 40%

1. Casparian strip
2. Endorphin
3. Excitatory postsynaptic potential
4. Counter current
5. r-selection
6. Archenteron
7. Taxa
8. C3 plant
9. Polygyny
10. Homeobox
11. Acquired immunity
12. Haversian system
13. Seminal vesicle
14. Plankton
15. Saltatory conduction
16. Zona polarity activity
17. Pattern formation
19. Clonal selection
20. Basidium

B. Questions: 60%

1. Compares and illustrates the division and the neurotransmitters in the nervous systems of vertebrate animal. 8%
2. Give a illustration of the hormone regulation and osmoregulation of the kidney. 8%
3. Compares and illustrates the signal transduction pathways of a cell response to red light and auxin's stimulation. 6%
4. Describes and illustrates the morphology and function of spleen and thymus. 6%
5. Describes the patterns, mechanisms, and models of speciation relationship among the biological diversity, biogeography, phylogenetic, and evolution. 6%
6. Compares and illustrates the life cycle and evolutionary trends in various angiosperm lineages. 6%
7. Compares and illustrates the relationship of animal phylogeny evolution with their development, body plan, cleavage, and coelomate formation. 8%
8. Compares and illustrates of the nitrogen fixation among the plant, bacteria and atmosphere. 6%
9. Describe the chemical and biological events in eutrophication lake. 6%