

1. What are the different modifications of root system?
2. What is venation?
3. What is phyllotaxy? What are the different types of phyllotaxy? Give an example of each.
4. What is a simple and compound leaf?
5. What are actinomorphic and zygomorphic flowers?
6. Describe the hypogynous, perigynous and epigynous ovary with diagrams.
7. What is aestivation? Describe with an example different types of aestivation in floral buds.
8. What is placentation? Describe its different types with an example.
9. What is a fruit? Mention the different parts of a fruit.
10. Draw the diagrams of a monocot and a dicot seed showing embryo.
11. Describe the characteristics of a family: Fabaceae/Solanaceae/Liliaceae.
12. What are meristematic tissues? Mention the different types of meristems in plants.
13. Compare the different types of simple permanent tissues in plants.
14. What are the components of xylem and phloem? Mention the functions of each.
15. What are the differences between root hairs and trichomes?
16. What are open and closed vascular bundles?
17. Describe the intra and extra stellar secondary growth in a dicot stem.
18. Differentiate between ammonotelic, ureotelic and uricotelic animals.
19. Draw neat and labeled diagrams of human urinary system/a nephron.
20. Describe the three steps involved in the formation of urine in nephron.
21. Give an account of counter-current mechanism in the formation of urine.
22. Discuss the role of skin and liver in excretion.
23. How is kidney functions regulated?
24. Differentiate between skeletal, smooth and cardiac muscles.
25. Describe the features of a sarcomere.
26. Describe the molecular structure of actin and myosin.
27. Explain sliding filament theory emphasizing the role of calcium.
28. What are ribs? Mention the different types of ribs in our body.
29. Give the location of glenoid cavity and acetabulum and acromion process.
30. What are joints? Describe the different types of joints with an example each.
31. Describe the structure of a nerve cell with the help of a labeled diagram.
32. Describe the electrical and chemical conduction of a nerve impulse.
33. What are the different parts of our brain? Mention the main functions of each part.
34. What is reflex action and reflex arc? Explain with an example.
35. Describe the structure of our eye with the help of a labeled diagram.

36. Describe the structure of organ of corti.
37. How our body equilibrium is maintained by ears?
38. What is the role of hypothalamus in chemical co-ordination?
39. Prepare a chart to show the location, major hormones produced, deficiency disorders, harmful effects of hormones in excess.
40. Describe the mechanism of hormone action.