



Octahedron institute, chandan nagar

office no 2, 1st floor chandan complex

Class 10 - Science

Control and coordination

Maximum Marks: 95

Time Allowed: 2 hours

Section A

1. How is control and coordination between environment and plants brought about? 2
2. How does chemical co-ordination take place in plants? 2
3. What will happen if thyroxin becomes excess? 2
4. How do we detect the smell of an agarbatti (Incense sticks)? 2
5. Sameer was studying in his room. Suddenly he smells something burning and sees smoke in the room. He rushes out of the room immediately. Was Sameer's action voluntary or involuntary? Why? 2
6. Why is pancreas called a 'dual function' gland? Write the names of its hormones. 2
7. What are practical uses of application of gibberellins? 2
8. Male cats which are castrated behave differently afterwards. What do these differences tell you about some of the effect of testosterone? 2
9. Why Mimosa pudica (touch-me-not) leaves droop down when touched? 2
10. Describe the functions of spinal cord. 2
11. What parts of the brain are located in each basic region? 2
12. Give reasons : Injury to medulla oblongata results in sudden death. 2
13. Why are the electrical-chemical signals not an efficient means of communication in plants? 2
14. Why do stem and root move (grow) towards light and the centre of gravity of the Earth respectively? 2
15. Explain Hydrotropism. 2
16. Describe turgor movement. 2
17. Differentiate between Sensory or afferent nerves and Motor or efferent nerves. 2
18. What is feedback mechanism? 2
19. What are the physiological effects of gibberellins? 2
20. What would happen to an animal that has no hypothalamus? 2

21. Which types of glands in human body secrete hormones? State any one location for them. 3
22. Answer the following: 3
 - (i) Which hormone is responsible for the changes noticed in females at puberty?
 - (ii) Dwarfism results due to deficiency of which hormone?
 - (iii) Blood sugar level rises due to deficiency of which hormone?
 - (iv) Iodine is necessary for the synthesis of which hormone?
23. Draw the structure of neuron and explain its function. 3
24. Differentiate between Reflex action and Voluntary action. 3
25. Differentiate between hormones and enzymes. 3
26. What is the difference between the manner in which movement's takes place in a sensitive plant and movement in our legs? 3
27. What is the function of receptors in our body? Think of situation where receptors do not work properly. What problems are likely to arise? 3
28. Define hydrotropism and chemotropism 3
29. How does chemical co-ordination occur in plants? 3
30. How is reflex arc formed? Describe with diagram. 3
31. Describe the central nervous system in human beings. 5
32. List the major endocrine glands and state their position in the human body. 5
33. Compare nervous and hormonal mechanism for control. 5
34. Give the various functions performed by the plant hormones. 5
35. Design an experiment to demonstrate hydrotropism. 5