



20-9-2014

Std. XI C

BIOLOGY

Time : 3 hrs.

Marks : 70

**SECTION-A**

(1×8=8)

1. What is meant by apoplastic pathway ? Why does it occur in cortex and not in endodermis ?
2. What is hydroponics ?
3. Why is carbonic acid formed in RBCs but not in blood plasma ?
4. Define cardiac output.
5. Which limb of Henle is impermeable to water ?
6. How many bones are present in pelvic girdle ? Name them.
7. Which canal connects the pharynx with tympanic cavity.
8. Why is oxytocin called 'birth hormone' ?

**SECTION-B**

(2×10=20)

9. List four differences between guttation and transpiration.
10. Name the respective mineral element of plants that is
  - (a) Needed in the synthesis of auxin
  - (b) A component of nitrogenase and nitrate reductase.
11. What is the criteria for essentiality of elements for plants ?
12. How are polysaccharides and disaccharides digested in human body ?
13. Distinguish between— Oxyhaemoglobin and carbaminohaemoglobin
14. Why does the left ventricle possess a thicker wall than the right ventricle ?
15. What is the significance of JGA in kidney function ?
16. Distinguish between Red muscle fibres and white muscle fibres.
17. What happens when you step accidentally on a nail ?
18. Mention the function of the following :-
  - (a) FSH
  - (b) Progesterone
  - (c) Testosterone
  - (d) Calcitonin

**SECTION-C**

(3×9=27)

19. What is imbibition ? List two conditions that are necessary for imbibition to occur.
20. How are nodules formed in leguminous plants ?
21. Name the enzymes for protein digestion in the gastric, pancreatic and intestinal juices and mention their action.
22. Define oxygen dissociation curve. Draw a graph to explain.
23. How does transportation of CO<sub>2</sub> takes place in human blood.
24. Explain sliding filament theory of muscle contraction.
25. Explain the ribcage of human beings

**OR**

Explain the three types of joints found in the human body.

26. Draw a neat and well labelled diagram of human eye.
27. Write antagonistic effects of hormone with suitable examples.

**SECTION-D**

(5×3=15)

28. Explain the theories related to ascent of sap in plants.

**OR**

What is water potential ? On what factors does the value of water potential depend ? Define osmotic pressure and turgor pressure.

29. Describe nerve impulse transmission in a non-myelinated nerve fibre.

**OR**

Explain the different parts of human brain.

30. Describe various hormones secreted by the pituitary gland stating their functions.

**OR**

Name different hormones secreted by the adrenal cortex. Also state their functions and disorders related to their abnormal secretion.

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