



**MAR IVANIOS COLLEGE (AUTONOMOUS)**  
**THIRUVANANTHAPURAM**

Reg. No. :.....

Name :.....

**Third Semester Career Related B.Sc. Degree Examination, November 2015**

**First Degree Programme under CBCSS**

**Complementary Course: Biochemistry – III (for Botany and Biotechnology)**

**AUBB331: Physiological aspects in Biochemistry**

Time: 3 Hours

Max. Marks: 80

**SECTION – A**

*Answer ALL questions in one or two sentences.*

1. Describe Carbonic anhydrase reaction.
2. What is meant by renal threshold value ?
3. What do you know about Diabetes Insipidus ?
4. What is the role of glycated hemoglobin in predicting Diabetes status of an individual ?
5. List out two differences between vitamins and hormones.
6. Name bile pigments.
7. Define caloric value.
8. Write down the normal glucose and total cholesterol levels in blood.
9. What is the partial pressure of various gases in alveolar air ?
10. What do you know about scurvy ?

**(10 × 1 = 10 Marks)**

**SECTION – B**

*Answer any EIGHT questions, not exceeding a paragraph.*

11. What are the different blood groups under 'ABO' system ? What is the chemical basis of this classification ?
12. Distinguish between obstructive Jaundice and hemolytic Jaundice.

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- 13. What do you mean by chloride shift ?
- 14. Distinguish between clotting time and bleeding time.
- 15. List out two B- vitamins and their function.
- 16. What are anticoagulants ? Give two examples and their mode of action.
- 17. What are the ill – effects of obesity ?
- 18. How can we classify Diabetes Mellitus ?
- 19. Write the important functions, dietary source and deficiency diseases of any one fat – soluble vitamins.
- 20. Write a note on any two micro minerals ?
- 21. Give an idea about erythropoiesis.
- 22. What are the major functions of glucagon ?

**(8 × 2 = 16 Marks)**

**SECTION – C**

*Short essay type : Answer any SIX questions.*

- 23. Give an idea about Xenobiotic metabolism of liver.
- 24. Detail the structure and functions of nephron.
- 25. Give an account on bile pigment formation.
- 26. List out two renal function tests and their significance.
- 27. What are the functions of granulocytes and agranulocytes ?
- 28. Discuss the nutritional importance of carbohydrates and proteins.
- 29. Write a note on hemophilia.
- 30. What are the normal and abnormal constituents of urine ?
- 31. Give an account on atherosclerosis.

**(6 × 4 = 24 Marks)**

**SECTION – D**

*Long essay type : Answer any TWO questions.*

- 32. Explain the Intrinsic and extrinsic pathway of blood clotting.
- 33. Explain the structure and functions of hemoglobin. What are the different types of normal and abnormal hemoglobin ?
- 34. How does acid – base balance maintained in our body ?
- 35. Write an essay on adrenal hormones.

**(2 × 15 = 30 Marks)**

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