

**B.Sc. BIOCHEMISTRY**  
**Fifth Semester**  
**CLINICAL BIOCHEMISTRY**  
**(BBC - 22)**

**Duration: 3Hrs.**

**Full Marks: 70**

Part-A (Objective) =20  
Part-B (Descriptive) =50

**(PART-B: Descriptive)**

**Duration: 2 hrs. 40 mins.**

**Marks: 50**

**Answer any *five* of the following questions:**

1. What is Porphyria disease? How many types of Porphyria are present?  
Explain any two. (2+2+6=10)
2. What is Homocystinuria? How is it diagnosed and how can the disease be prevented? (2+3+5=10)
3. Describe the types of urine collection. Give a brief chemical analysis of urine. (7+3=10)
4. What are functional plasma enzymes? Describe the metabolic pathway of bilirubin. (2+8=10)
5. What is vitaminosis? Explain the disease related to hypothyroidism. Briefly describe hypoinsulinism. (2+4+4=10)
6. What is the normal value of blood glucose and uric acid? Explain how these two parameters are estimated. (4+6=10)
7. Explain the concept of homeostasis and thrombosis. (5+5=10)
8. Give clinical presentation of liver and kidney function test. (5+5=10)

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**Duration: 20 minutes**

**Marks – 20**

**(PART A- Objective Type)**

**I. Choose the correct answer:**

**1×20=20**

1. Hypoglycemia is a condition in which the blood glucose level is
  - a. very high
  - b. moderate
  - c. above the threshold level
  - d. low
2. Glycohaemoglobin can be estimated with
  - a. boronate affinity chromatography
  - b. lowrys test
  - c. benedicts test
  - d. alkaline phosphatase activity
3. Deficiency of cystathione beta synthase cause
  - a. porphyria
  - b. homocystinuria
  - c. hypoglycaemia
  - d. diabetes
4. Diabetes is a disorder of
  - a. energy
  - b. glucose
  - c. metabolism
  - d. food
5. How many types of porphyria are found?
  - a. 8
  - b. 9
  - c. 7
  - d. 5
6. Hypervitaminosis A causes
  - a. rickets
  - b. night blindness
  - c. pellagra
  - d. none of these
7. The disorder of iodine metabolism leads to
  - a. xerophthalmia
  - b. anaemia
  - c. goiter
  - d. alzheimer
8. Increased amount of galactose in urine leads to
  - a. glucosemia
  - b. galactosemia
  - c. glucosuria
  - d. galactosuria
9. The number of isoenzymes in Lactate Dehydrogenase is
  - a. 2
  - b. 3
  - c. 4
  - d. 5

10. Thrombosis is a disease related to  
 a. less amount of RBC                      b. blood clot  
 c. hemolysis                                      d. none of these
11. Venipuncture is done for collection of  
 a. urine    b. cerebrospinal fluid  
 c. blood    d. all of the above
12. Bilirubin is excreted in feces as  
 a. stercobilin                                      b. urobilin  
 c. urobilinogen                                    d. biliverdin
13. Demyelination of neural tissue is caused by deficiency of  
 a. Fe                      b. Cu                      c. I                      d. K
14. Blood urea nitrogen level is measured in  
 a. liver function test                              b. pancreas function test  
 c. gastric function test                            d. kidney function test
15. Sick cell anaemia is an example of  
 a. insulinism                                      b. phosphatemia  
 c. hemoglobinopathies                            d. none of these
16. Gigantism is due to  
 a. increased secretion of growth hormone.  
 b. increased secretion of thyroid hormone.  
 c. decreased secretion of growth hormone.  
 d. decreased secretion of thyroid hormone.
17. The abnormal form of hemoglobin is seen in  
 a. thalassemia                                      b. thrombosis  
 c. homeostasis                                      d. none of these
18. Test for ALT and AST is done in  
 a. liver function test                              b. pancreas function test  
 c. gastric function test                            d. kidney function test
19. The concentration of functional plasma enzyme is  
 a. low in plasma than tissue                      b. higher in plasma than tissue  
 c. equal in both plasma and tissue              d. none of these
20. Blood glucose level is maintained by  
 a. insulin    b. thyroid  
 c. phosphate    d. both insulin and phosphate

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