

**B.Sc. MEDICAL LABORATORY TECHNOLOGY****SECOND YEAR****PAPER II – BIOCHEMISTRY - I***Q.P. Code: 725017***Time: Three Hours****Maximum: 100 Marks****Answer all questions****I. Elaborate on:****(3 x 10 = 30)**

1. How bilirubin is formed in the body? How bilirubin is excreted out of body?
2. List the hormones produced by the pituitary. How the secretion of these hormones regulated? Mention one biological function for each hormone.
3. Write the steps of anaerobic glycolysis. Which instrument and which sample are used to measure the end product of anaerobic glycolysis in hospital clinical biochemistry laboratory or intensive care unit?

**II. Write notes on:****(8 x 5 = 40)**

1. Salvage pathways for purine synthesis.
2. List the parameters estimated in Cerebrospinal fluid – CSF analysis and write their normal values in CSF.
3. What will happen to TSH, free T4, free T3 levels in hypo and hyper thyroidism?
4. Dexamethasone suppression test.
5. How is creatinine formed?
6. How is iron absorbed?
7. Describe the function of estrogen.
8. What is the normal uric acid level in plasma? How is uric acid excreted? What are the clinical features of increased uric acid level?

**III. Short answers on:****(10 x 3 = 30)**

1. Write the rate limiting step of cholesterol synthesis.
2. Acute intermittent porphyria is a deficiency of which enzyme and which substances accumulated in this condition?
3. Name the bile acids. What is the function of bile acid?
4. Name three glycogen storage disorders.
5. List the special properties of fetal hemoglobin.
6. Name the analytes measured by flame photometer.
7. Name three hormones increasing blood glucose level.
8. Name two transaminases. Name the coenzyme of transaminases.
9. What are the features of tetany?
10. Name three prostaglandins.

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