

QUESTION ONE:

On scientific basis, correct each of the following statements:

(20 x 1.0= 20 Marks, 40 min)

No.	Incorrect statement	Corrected
1	Measurement of ALT is a sensitive and specific test for liver damage.	
2	In chronic liver disease the prothrombin time is usually normal.	
3	Bilirubin is conjugated in the kidney by the enzyme UDPG- transferase.	
4	In physiological jaundice of the newborn infants both direct and indirect bilirubin are elevated.	
5	Hyperuicemia is the main cause of coma in advanced chronic liver disease.	
6	Plasma calcium level is regulated by thyroid hormone.	
7	Creatinine clearance=GFR= $P \times U/V$	
8	Increased ratio of BUN/creatinine with increased creatinine level indicates pre-renal uremia.	
9	Microalbuminuria is defined as urinary albumin concentration greater than 300mg per day.	
10	In diabetes insipidus, urine/plasma osmolality ratio is about 1-to-3.	
11	The biochemical findings in pre-renal uremia include metabolic alkalosis and hypokalemia.	

12	Renal tubular acidosis type IV results from inability of proximal tubules to reabsorb bicarbonate.	
13	Chronic renal failure is associated with hypochromic normocytic anemia.	
14	Acute tubular necrosis is characterized by polyuria and casts in the urinary sediment.	
15	Level of fructosamine in the blood is a reflection of glucose levels over the previous 2-3 months.	
16	Glucose intolerance during pregnancy lead to type 2 DM.	
17	HONK coma is one of main complication of type 1 DM.	
18	Erythropoiesis in adult individuals occurs normally in the kidney.	
19	The RBCs in folate deficiency anemia are microcytic hypochromic.	
20	Somatostatin stimulates the production of insulin-like growth factor-1.	

QUESTION TWO:

Regarding the following sentences, fill in the vacant spaces with suitable word(s): **(20 x 0.5= 10 Marks, 25 min)**

- (1) Examples of acute phase proteins are and
- (2) M spike in the serum protein electrophoresis indicates
- (3) Plasma test showing turbid to opaque plasma without creamy layer on the top indicates Type hyperlipidemia.
- (4) Analysis of plasma lipids requires fasting for at least hours.

- (5) Apo CII in lipoproteins, besides having structural role, it functions as
- (6) In plasma lipoprotein electrophoresis, the beta band represents
- (7) Elevated level of Lp(a) in plasma is associated with an increased risk of
- (8) The biological half-life of albumin in plasma is days.
- (9) Albumin functions as transport molecule for and
- (10) Advanced chronic liver disease is associated with oedema, which is due to
- (11) is secreted by adrenal cortex in response to a decline in either blood volume or blood pressure.
- (12) Examples of amino acid derivative hormones are and
- (13) Thyroid hormones are found in the circulation associated with, and
- (14) When white blood cells are decreased, the condition is called
- (15) is a test for extrinsic system of blood clotting.

QUESTION THREE:

Identify the cause(s) for each of the following clinical disorders:

(10x 1.0= 10 Marks, 35 min)

No.	Clinical Disorder	Causes
1	Post-renal uremia	
2	Pre-hepatic jaundice	

3	Type II hyperlipoproteinemia	
4	Hypergammaglobulinemia	
5	Secondary hyperlipidemia	
6	Megaloblastic anemia	
7	Hypoglycemia	
8	Pheochromocytoma	

9	Diabetes insipidus	
10	Insulin resistance	

QUESTION FOUR:

Differentiate between each pair of the following as indicated:

(10 Marks, 20 min)

(1) Type 1 & type 2 diabetes mellitus:

Point of comparison	Type 1 (IDDM)	Type 2 (NIDDM)
Age of onset		
Body weight		
Genetic susceptibility		
Ketosis		
C-peptide level		

(2) Hemophilia & purpura:

Point of comparison	Hemophilia	Purpura
Heredity		
Affected gender		
Clotting time		
Bleeding time		
Causes		

(3) Growth hormone & cortisol:

Point of comparison	Growth hormone	Cortisol
Site of secretion		
Metabolic actions		
Diseases associated with hormonal disturbance		

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