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Paper:- Chemical pathology.

Section .A

1. Two students of MLT are talking about the use of cholesterol in food one says it's good to have cholesterol in food the other said use of more cholesterol is not good for our health they both asked from the class teacher and he replied having high triglyceride levels in your blood can make your more likely to have **Heart disease ©**.
2. Focal segmental glomerulosclerosis is a disease that scars the **Glomeruli (B)**.
3. Minimal change disease > ``MCD'' is the most common cause of nephrotic syndrome in **Children ©**.
4. The main signs or symptoms make up nephrotic syndrome is are **All of the above (D)**.
5. To diagnose a patient nephrotic syndrome you should go for **Urine Test (A)**
6. Your class teacher gives you a history patient such that a patient having yellow skin and body fluid that is the by product of RBCs breakdown. Red blood cells typically

survive for about 120 days before the body breaks them down. an increased breakdown of RBCs made The skin and body fluids colour yellow. this is due to **Bilirubin (A)**

7. New borns with jaundice are carefully monitored and generally improve within **48 to 72 hours (D)**.
8. All are true regarding Bilirubin Test **Help diagnose conditions (D)**
9. A patient of malabsorption syndrome is admitted in LRH ward and you have to test to the condition, of all the possible diagnostic test the most reliable test of malabsorption is **Berth test ©**.

10. The urine albumin to Creatinine Ratio UACR is a test that estimate how much albumin is excreted in a **24 hour (B)**

11. Which option are not true about kidney function **Red Blood cells(Erythropoietin) formation. ©**

12. Structure and functional unit of kidney is **Nephron ©**.

13. Normally: The pH of urine **Acidic.(A)**

14. Uric acid is the end product of **Uera** catabolism.**(D)**

15. **HDL** is known as the good cholesterol. **(A)**

Section B

Ans no 1:-

Proteinuria:-

The condition in which the abnormal amount of protein is present in the blood is called proteinuria.

Causes:-

When the dose not filter the blood so mineral and wastes accumulate in the blood is called proteinuria.

Major Serum proteins:-

There are mainly two types of protein in the blood called Albumin and globulins The albumin is present in large amount account upto 50% of all Serum protein the most important function of albumin is to maintain the right amount of water in the circulatory system.

- . Also binding the carrying substance.
- . The globulins are further divide into sub types which are Alpha ,Beta , and Gamma globulins.
- . Alpha and Beta globulins work as transport the substance while Gamma work as Antibodies.

Types of proteinuria

1. Transient proteinuria:-

It is the temporary condition of excretion of protein which is voided by strenuous exercise.

2. Orthostatic proteinuria:-

The amount of protein is excreted when the person is an upright position the condition is called orthostatic proteinuria.

.It is mostly found in a tall thin Adolescents and also in Young adults less than 30 years of age. The kidney are often healthy.

Symptoms:-

Mostly having no symptoms but screening in people show a high blood pressure diabetes the edema may also occur which is present an

- Abdomen
- Weight gain
- Hypertension

Diagnose of proteinuria:-

- 10 ferform teste
- The urine albumin to Creatinine Ratio UACR is done find how much urine is lossed in 24 hour.
- Some test are done to check the Serum, Creatinine, albumin, cholesterol etc.

.If kidney is suspected then those tests may be done.

- Glomerular filtration Rate (GFR)

- Renal ultrasound scan.
- Kidney biopsy.

Treatment:-

- To control blood sugar level.
- Restrict salt in their diet people having nephrotic syndrome
- To control the hypertension.

Ans no 3 :-

Courses of Cushing syndrome:-

The main cause of Cushing syndrome is the excess of hormone cortisol. We know that Adrenal gland produce the cortisol .

Corticosteroids:-

The corticosteroid medication mainly cause the Cushing syndrome. Such as Prednisone for high dose and long period.

Injectable steroids:-

The high dose injectable steroids for back pain can also cause the Cushing syndrome.

Endogenous Cushing syndrome given below:-

- ACTH dependent upto 80.
- Ectopic ACTH secretion by tumour 10.

- CRH -Secreting secretion by tumour less than 0.5.

.Stress the Cushing syndrome is under reported due to stress.

. Hypertension:-

- Can cause Cushing syndrome.

Ans no 2 :-

Ketonuria:-

It is a medical condition in which is characterized by ketones in the urine.

Cause of ketonuria:-

The human body can use combination of protein , carbohydrates , fats for the cellular tissue the glucose.

Associated condition of ketonuria:-

- 1. Starvation:-** when our body don,t consume food for long time Insuline decrease and glucose will stored in body and fats degredation will produce ketones.
- 2. Digestive ketones:-** Due to more use of fats is produce.
- 3. Vomiting and Diarrhea:-** Due to starvation fats will be break and ketones will excreted into urine.

Symptoms:-

1. Fruity smelling breath a furity that is excreted through the lungs.
2. Nausea and vomiting:- due to imbalance of Na and potassium Nausia and vomiting is occurred.
3. Heavy breath.
4. Confusion and Disorientation.
5. Frequent urination.
6. Excessive thirst.

Diagnosis:-

- Blood test are carried out .
- Urine test .
- A positive result may tiggered if ketones level range full in the 0.6-1.5mmol/L
- **Prevention:-**
 1. Proper management of diabetes.
 2. The died must take with care between which can increase the Chance of ketonuria.

Phenyl ketonuria:-

- This as an Autosomal recessive metabolic genetic Disorder.
- Mutation in Gene for phenylalanine hydroxylase.
- **Etiology / Courses:-** the Autosomal recessive disorder coused by mutation in PAH gene.

Symptoms:-

- Children are appear healthy birth .

- Learning disabilities.
- Behavioural difficulties is also .
- Epilepsy.
- Vomiting
- Mood disorder microphetialy.
- Jremor

Diagnosis screening of blood samples:-

- If PKU is confirmed then regular test is done.
- Treatment:- PKU can be successfully treated by low - protien died and dietary supplements.
- The diet strickly followed.

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