**Assignment viva final term 2020 : course TITLE chemical pathology:**

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**Explain the following:**

**1: thyroid profile:**

Thyroid function tests are a series of blood tests used to measure how well your thyroid glands working.

Available tests include the T3, T3 ,T3RU,T4 and TSH, the thyroid is a small gland located in the lower front part of your needle.

T3 is second thyroid hormones they produced by thyroid gland. But and in other tissue .

T4 ,and T3 control the muscles, brain function and development, heart and digestive function.

T4 is produced by the thyroid under regulation from the hypothalamus and pituitary gland.

The hypothalamus into release thyrotropin releasing hormones, they stimulate pituitary gland to release thyroid stimulating hormone.

**Problem Associated T3And T4 .**

T3 is the blood stream referred to thyrotoxicosis this condition the result from overacctivity the thyroid gland .or hyperthyroidism.

That occur in conditions such graves disease inflammation thyroid begin tumor.

Sign includes weight loss .

Increase appetite .

Palpitations irregular menstrual cycle .

Hyperthyroidism is condition that occur thyroid gland not produced enough of the thyroid hormones, this may be due to to autoimmune conditions such as Hashimoto’s thyroiditis or certain medication .

Hyperthyroidism also occur in pituitary dysfunction, such as pituitary tumor inflammation.

**Cardiac Enzyme test:**

A cardiac enzyme test is one tool doctors use to see if your having or already had a heart attack. That might also get the test if you have symptoms of a blockage in your heart arteries such as .

* Dizziness
* Chest pain or pressure.
* Feeling very weak or tired.
* Shortness and cool clammy skin.
* Chest pain or pressure.

Throwing up or feeling like you need to severe stress on the heart can damage muscle.

Your heart releases certain enzyme. A kind of protein into your blood.

After the heart attack they level of these enzymes can get pretty high .

So chucking them is a good way for your doctor something serious in going on.

Cardiac enzyme test just that doctor might want to measure your enzyme to finger out. What happening with your heart

Your doctor will most likely test for an enzyme called troponin.

**Electrolyte test:**

That test can help determine whether an electrolyte imbalance in the body .

They are salts and minerals, such as potassium, chloride, sodium and bicarbonate. They are found and the blood.

They can conduct electrical impulses in the body.

Test sometimes occurs out during a routine physical examination or it may be used as part of a more comprehensive set of test.

**For example:**

Your electrolyte level may be checked if you prescribe certain medications.

That as diuretics or angiotensin converting enzymes. Inhibitors which one often used high blood pressure.

The checking level of electrolytes in the blood.

Electrolyte panel specific blood test.

The key used to find out there acid base imbalance and normal blood range 7.35to7.45

**Liver function test:**

Liver function test also know as liver chemistries help determine the healthy of your liver by measuring the levels of protein liver enzymes and bilirubin in your blood .

* A liver test is often recommended in the following situations.
* If you drinks the alcohol heavily.
* You have gallbladder disease.
* The medical condition such as high triglycerides , diabetes, high blood pressure or anemia.
* Experiencing the symptoms of liver disorder.
* You have already liver disease to monitor the disease and how well a particular treatments is working .
* To check for damage from liver infections such as hepatitis B and C .
* Many test can performed on the liver certain test can reflect different aspects of liver function.
* Commonly used test to check liver abnormalities are test checking .
* Alanine transmission AlT.
* Albumine .
* Asparate aminotransferase Ast .
* Bilirubin

**Renal function test:**

A test in which blood or samples are checked for the amounts of creatinine substance released by the kidney .A higher or lower than normal amount of a substance can be a sign that kidney are not working the way they should also called kidneys function.

**Assessment of renal function:**

There are number of clinical laboratory test that is useful in investigating and evaluating kidney function.

Clinically the most practical tests to assess renal function is to get an estimate of the glomerular filtration rate are to check for proteinuria.

**Glomerular filtration rate:**

The best over all indicators of the glomerular function is the glomerular filtration rate. The normal GFR for adult Male is 90 to 120 ML per minute.

The characteristics of an ideal marker of GFR are as follows.

* It should not undergo external elimination.
* It should appear endogenously in the plasma at a constant rate.
* It can be neither reabsorbed nor secreted by the renal tubale.
* It should be freely filtered at the glomerulus.

**Creatine:**

The most commonly used endogenous marker for assessment of glomerular function is creatine. The calculated clearance of creatinine is used to provide an I indicator of GFR. The collection of urine over 24 hour period .or preferably over an accurately timed period of 5 to 8 hours since 24 hour collection are notoriously unreliable.

**Using the equation.**

**C= (U\*V)/P** .

**Explain lipid profile:**

Medical definition of lipid profile lipid profile A pattern of lipid in the blood. A lipid profile usually includes the levels of total cholesterol, high density lipoproteins cholesterol, triglycerides and the calculated low density lipoproteins cholesterol.

A complete cholesterol test is also called a lipid panel or lipid profile.

Your doctor can use it to measure the amount of good and bad cholesterol and triglycerides a type of fat in your blood cholesterol is a soft waxy fat that your body needs to function properly.

Less than 100 mg/ dl is ideal 100 to 129 mg/dl can be good depending an your health. 130 to 159 mg/dl is borderline high 160 to 189mg/dl is high.

Serum lipid profile is measured for cardiovascular risk prediction has show become almost a routine test .

The test includes four basic parameters. Total cholesterol HDL cholesterol.

LDL cholesterol and triglycerides it is usually done fasting blood specimen.

**Tumor marker:**

A substance found in your blood ,urine or body tissue .the term ,tumor marker, may refer to protein that are made by both healthy cell and cancer cells in the body . It may also refer to mutations change or patterns in tumor DNA.

Tumor marker are substance found in the high level when there is cancer is the body . They are not very specific meaning non cancer health issues can also cause these level higher .they most be used along with radiology tests and exam by your health care provider.

Tumor marker are chemicals made by tumor cell that can be detected in your blood . But tumor marker are also produced by some normal cells in your body and level may be significantly elevated in non cancerous conditions.

This limits the potential for tumor marker tests to help in diagnosing cancer.

**Fertility hormones:**

Stimulates the ovaries to release an egg and start producing progesterone a hormone that prepares the uterine environment to nurture a fertilized egg. LH can be found in women’s urine just before ovulation occurs.

Help is got pregnant key hormones that affect fertility.

FSH is the most important hormones for fertility, FSH or follicle stimulating hormone is responsible for maintaining cycle regulated and producing healthy egg.

**Fertility drugs:**

Clomiphene taken as a pill and FSH , CH hormones injection are the main treatment for women with ovulation disorder women with no clear cause of their infertility might also use. These drugs injection of GnRH, LH, or FSH help mature eggs and induce ovulation.

**Hormonal imbalances**:

A hormonal imbalance can cause female infertility by disrupting ovulation .

Preventing the thickening of the uterine lining , or otherwise preventing a pregnancy from becoming established.

**Thank you**

**End**