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Assignment Name: Clinical Pathology lab

Explain the following.

1. liver function tests.
2. Renal function tests
3. Lipid profile
4. Electrolytes
5. Fertility hormones
6. Thyroid profile
7. Tamar markers
8. Cardiac enzymes profile

1) Liver function test are done for liver abnormalities
The **ALT** and AST tests measure enzymes that your liver releases in response to damage or disease. The albumin test measures how well the liver creates albumin, while the bilirubin test measures how well it disposes of bilirubin. ALP can be used to evaluate the bile duct system of the liver. Sgpt, Ast, TOTAL bilirubin, direct bilirubin, indirect billion, and ALK tests are in liver function tests.

2) Renal function tests is basically done for Kidney disease or Kidney abnormalities.
Your kidney numbers include 2 tests: ACR (Albumin to Creatinine Ratio) and GFR (glomerular filtration rate). GFR is a measure of kidney function and is performed through a **blood test**. Your GFR will determine what stage of kidney disease you have
Renal function tests are urea , creatinine, and many other.

3) 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 .

your doctor suggests a "fasting" cholesterol **test** (also called a "**lipid profile**"), the lab will analyze your **levels** of LDL, HDL, triglycerides, and total cholesterol. For that **test**, you will need to fast nine to 12 hours before the blood **test.**

4) An **electrolyte test** can help determine whether there's an **electrolyte** imbalance in the body. **Electrolytes** are salts and minerals, such as sodium, potassium, chloride and bicarbonate, which are found in the blood. They can conduct electrical impulses in the body. **Sodium**, **calcium**, **potassium**, chloride, phosphate, and **magnesium** are all electrolytes. You get them from the foods you eat and the fluids you drink. The levels of electrolytes in your body can become too low or too high.

5) **Fertility drugs** generally work like the natural **hormones** — follicle-stimulating **hormone** (FSH) and luteinizing **hormone** (**LH**) — to trigger ovulation. They're also used in women who ovulate to try to stimulate a better egg or an extra egg or eggs.

Key **Hormones** That Affect **Fertility**

FSH is of the most important **hormones** for **fertility**, FSH or follicle-stimulating **hormone** is responsible for maintaining cycle regularity and producing healthy eggs.

6) The **thyroid** is a small gland located in the lower-front part of your neck. It's responsible for helping to regulate many of the body's processes, such as metabolism, energy generation, and mood. The **thyroid** produces two major hormones: triiodothyronine (T3) and thyroxine (T4).

Thyroid function **test**

A high level of TSH and a low level of T4 in **the blood** could **mean** you have an underactive **thyroid**. If **your test results** show raised TSH but **normal** T4, you may be at risk of developing an underactive **thyroid** in **the** future.

7) What are **tumor marker tests**? These **tests** look for **tumor markers**, sometimes called **cancer markers**, in the blood, urine, or body tissues. **Tumor markers** are substances made by **cancer** cells or by normal cells in response to **cancer** in the body. Some **tumor markers** are specific to one type of **cancer**

Tests to Find and Diagnose Cancer

- Imaging (Radiology) Tests for Cancer.
- Understanding Radiation Risk from Imaging Tests.
- CT Scans.
- MRI.
- X-rays and Other Radiographic Tests.
- Nuclear Medicine Scans.
- Ultrasound.
- Mammograms.

8) Cardiac enzyme studies measure the levels of the **enzymes** creatine phosphokinase (CPK) and creatine kinase (CK), and the proteins troponin I (TnI) and troponin T (TnT) in the blood. Values and units for reporting the results of **cardiac enzyme** tests vary considerably

Cardiac enzymes — also known as cardiac biomarkers — include myoglobin, **troponin** and **creatine kinase**. Historically, lactate dehydrogenase, or

LDH, was also used but is non-specific. Cardiac enzymes are released into the circulation when myocardial necrosis occurs, as seen in myocardial infarction.