Histology practice /Second stage /Lecture 1/Mrs.ekhlas

Histology : is a science which study the microstructure and the relationship between the structure and function .

#### Microscope



#### Function of each Microscope Part 1. Eyepiece or Ocular Lens

Eyepiece lens magnifies the image of the specimen. This part is also known as **ocular**.

# 2. Eyepiece Tube or Body Tube

The tube hold the eyepiece.

### 3. Nosepiece

Nosepiece holds the objective lenses and is sometimes called a revolving turret. You choose the objective lens by rotating to the specific lens one you want to use.

# 4. Objective Lenses

Most compound microscopes come with three or four objective lenses that revolve on the nosepiece. The most common objective lenses have power of 4X, 10X and 40X. Combined with the magnification of the eyepiece the resulting magnification is 40X, 100X.

## 5. Arm

The Arm connects the base to the nosepiece and eyepiece. It is the structural part that is also used to carry the microscope.

### 6. Stage

The stage is where the specimen is placed. This place is for observation.

## 7. Stage Clips

Stage clips are the supports that hold the slides in place on the stage.

## 8. Diaphragm (sometimes called the Iris)

The diaphragm controls the amount of light passing through the slide. It is located below the stage and is usually controlled by a round dial. How to set the diaphragm is determined by the magnification, transparency of the specimen and the degree of contrast you wish to have in your image. Also called the condenser diaphragm.

# 9. Illuminator

Most light microscopes use a low voltage bulb which supplies light through the stage and onto to the specimen. Mirrors are sometimes used instead of a built-in light. If your microscope has a mirror, it provides light reflected from ambient light sources like classroom lights or sunlight if outdoors.

# 10. Coarse focus

Coarse focus moves the stage to provide general focus on the specimen. When bringing a specimen into focus, the course dial is the first one used.

### **11. Fine focus**

Fine focus moves the stage in smaller increments to provide a clear view of the specimen. When bringing a specimen into focus, the fine focus dial is the second one used.

#### 12. Base

The base is the main support of the microscope. The bottom, where all the other parts of the microscope stand.

## Animal cell

Cell-most basic unit structure of life .Unicellular life formsperform and carry out life processes .

Multicellular –group of cells ,perform more complex life processes

,different cells are present ,performing a certain function.

Animal cells are typical of the eukaryotic cell enclosed by a plasma membrane and containing a membrane –bound nucleus and organells Animal cells do not have a cell wall ,and rang in size between 1 and 100 micrometers.



Figure: Animal Cell Structure, image topy get @ tager leyel, www.adouteectes.com