

## **Cell biology lab.**

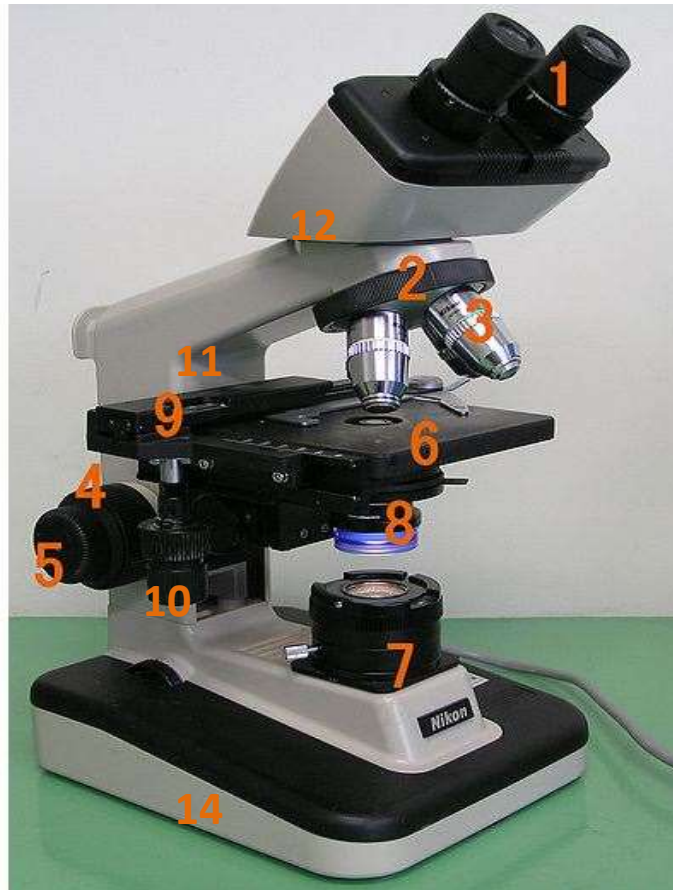
### **The Light Microscope**

The microscope produces an enlarged image of an object to be examined , the image becomes magnified as it is transmitted through the lenses , this magnification depends on the power of lenses used .The light microscope is only instrument available for examining cells in their natural state .

**Magnification power = Magnification power × Magnification power**  
**Of microscope                      of eye piece                      of objective lens**

**Part of light microscope:**

- 1. Eye piece**
- 2. Revolving nosepiece**
- 3. Objective lenses**
  - A- Low power objective lens of 10×**
  - B-High power objective lens of 40× or 100×**
  - C-Oil immersion objective lens of 100×**
- 4. Coarse adjustment**
- 5. Fine adjustment**
- 6. Stage**
- 7. Light source or Lamp**
- 8. Condenser**
- 9. Mechanical stage**
- 10. Knobs of mechanical stage**
- 11.Arm**
- 12.Body tube**
- 13.Clip**
- 14. Foot**



### ***Care of the microscope***

- Hold a microscope firmly by the stand, only. Never grab it by the eyepiece holder, for example.
- Since bulbs are expensive, and have a limited life, turn the illuminator off when you are done.
- Always make sure the stage and lenses are clean before putting away the microscope.
- NEVER use a paper towel, your shirt, or any material other than good quality lens tissue or a cotton swab (must be 100% natural cotton) to clean an optical surface. Be gentle, You may use an appropriate lens cleaner or distilled water to help remove dried material. Organic solvents may separate or damage the lens elements or coatings.
- Focus smoothly; don't try to speed through the focusing process or force anything. For example if you encounter increased resistance when focusing then you've probably reached a limit and you are going in the wrong direction.
- Cover the instrument with a dust jacket when not in use.