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● Q1. Define magnification and resolution?

Answer:

(1) Magnification:

The action which enlarge the image

Magnification is the process in which we enlarge the distinct size, of some things (Cell, tissue, ETC)

(2) Resolution:

The term resolution is used to define the capability of microscope to separate the detail of two particle image/objects.

Q2.

Write down the components of microscope?

Answer:

***Eye Piece:**

. It is called eye piece because it is the lens that is nearest to eye of
. of the person who is looking via microscope.

***NosePiece:**

.Rotatory part of microscope.

.It hold the object.

.Easily rotate to change magnification.

***Diaphragm:**

.Control the light size and concentration.

***Objective lenses:**3,4 lenses with magnification power.

***Stage Clips:**It hold the slide.

***Base:**Support to microscope.

***Arm:**Give support to microscope during transportation.

***Condenser:**Focus light on sample.

***Knob:**

***Coarse Adjustment Knob:**Control movement of stage.

***Fine Adjustment Knobs:**Provide good focusing.

*** Light Source:**Give light.

Q3. Write a note on flame Photometry ?

Answer:

Flame Photometry (electrolyte analysis)

More accurately called flame atomic emission spectrometry.

It is a device which are used in inorganic chemical analysis to determine the concentration of some metal ion(solution,potassium,calcium,lithium).

This technique was introduced in 19 century by two scientists Bunsen and Kirchhoff.

Components:

- .Burner
- .Filter(monochromator)
- .Nebulizer
- .Photodetector
- .Lens
- .Galvanometer

Q4. What is centrifuge , also explain its types?

Answer:

Centrifuge:

Centrifuge is latin words centrum & fudge .

Centrum mean centre

Fudge mean to Escape

History:

In 1864 Antonin Promdle proposed the Idea of dairy Centrifuge to separate cream from milk.

Definition:

Centrifuge is a laboratory instrument which use for separating particles from solution according to there size , shape , density and viscosity.

Uses of Centrifuge:

- ❖ Used for separation of serum and blood cell from plasma.
- ❖ Determine the hematocrits value .
- ❖ Isolation of sub cellular organelles.
- ❖ Estimation of purify macro molecules.
- ❖ Preparation of blood component.

Q5. Describe the chromatography and its types?

Answer:

Chroma mean colour

Graphy mean draw up

- ❖ Dr Mikhail S-Tavel invented a system in 19th Century Similar to paper Chromatography.

- ❖ It is a Separation technique.
- ❖ Chromatography is a laboratory technique which use for component present in mixture.

Principle:

Chromatography is a physical method which separate component into two different phases.

(1).Stationary phase:

The substance on which adsorption of the analytic occur.

(2).Mobile phase:

Solvent which carries the sample.

Q6. Explain the components of water bath?

Answer:

Water bath:

A device used in the laboratories to incubate sample in water maintained at a constant temperature.

Component of Water bath:

(1). Vessel or Trough of Insulated metal:

It is made up stainless steel or made of heat resistance glass, with or with out an insulated Lid.

(2). Electric element:

It provide heat to water which are present in trough.

(3). Propeller or stirrer:

It Circulate the water in trough and maintain a uniform temperature.

(4). Thermo meter:

Check the temperature it may placed separately in the trough.

(5). Thermostat: control temperature