

BLOOD

- Total blood volume :- 5-6 Litres
- pH :- 7.4 ± 0.05 [Alkaline]

Anticoagulated blood → centrifuged & allowed to stand



CELLS (45%)

PLASMA (55%)

• K/a Packed cell volume (PCV)
OR Haematocrit

Buffy coat
(WBC)

91% water

9% solids

Inorganic

Na K Ca Mg
Cl HCO_3^- PO_4^{2-}
Protein Fe^{+2} Fe^{+3}

Organic

Plasma proteins

Albumin, Globulin,
Fibrinogen, Prothrombin

Others

sugar, fat,
enzyme,
hormone

1) RBC's / Erythrocytes

≈ 5 million/ μL

2) WBC's / Leucocytes

$\approx 4,000 - 11,000/\mu\text{L}$

3) Platelets / Thrombocytes

$\approx 1.5 - 4$ lacs/ μL

A:G = 1.7 : 1

Functions of Blood :-

- 1) Homeostasis (for water, pH, temp, electrolyte)
- 2) Temperature regulation
- 3) Nutritive
- 4) Excretory
- 5) Transport & communication (hormones etc..)
- 6) Transport of gases — RBC!
- 7) Immunity — WBC!
- 8) Clotting / Anticlotting — Platelets!
- 9) Plasma protein functions (To be discussed...) — Plasma proteins!

[HOT NET Blood cells
plasma proteins]

SERUM...!

SERUM = Plasma - Fibrinogen - factor (2, 5, 8)

plays a role in clotting

Have high SEROTONIN content. why? ⇒ D/t breakdown of platelets during clotting.