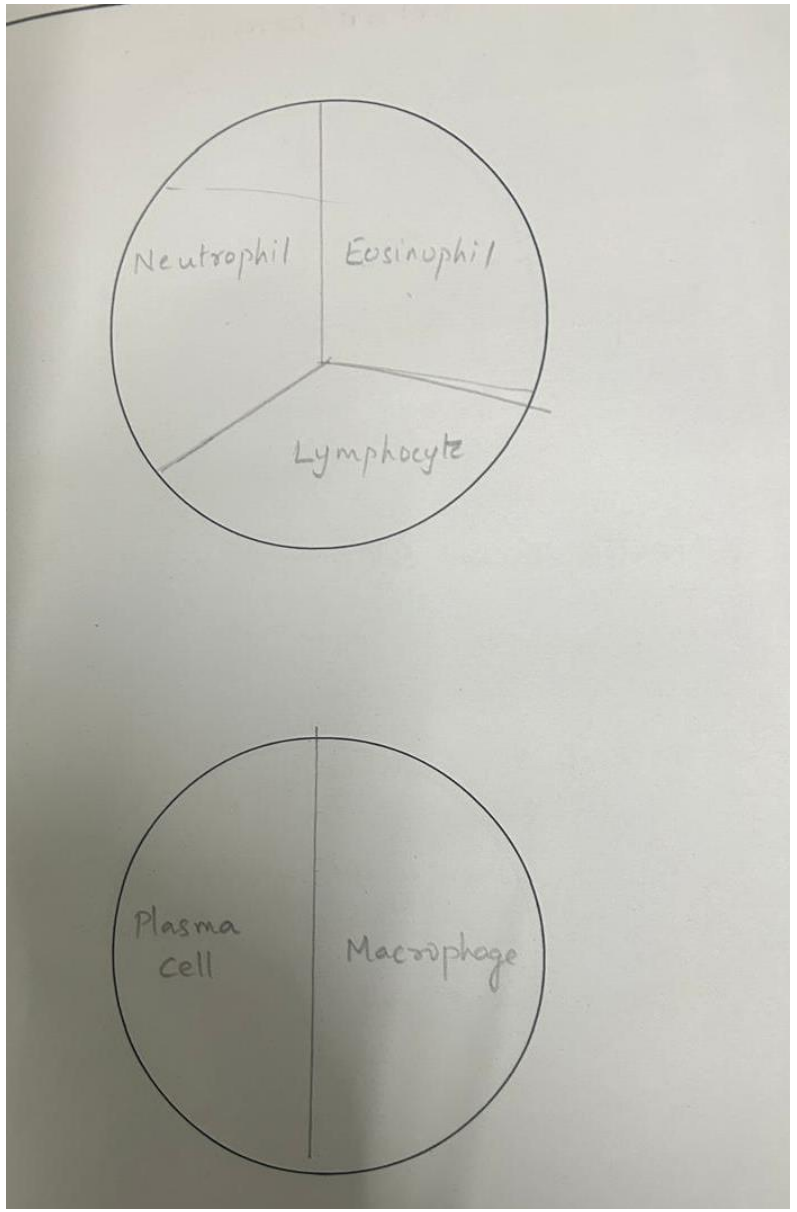
# HISTOPATHOLOGY PRACTICALS

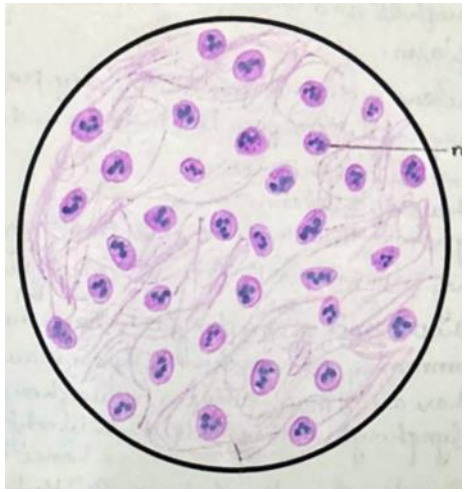
CELL DEMOSTRATION -1

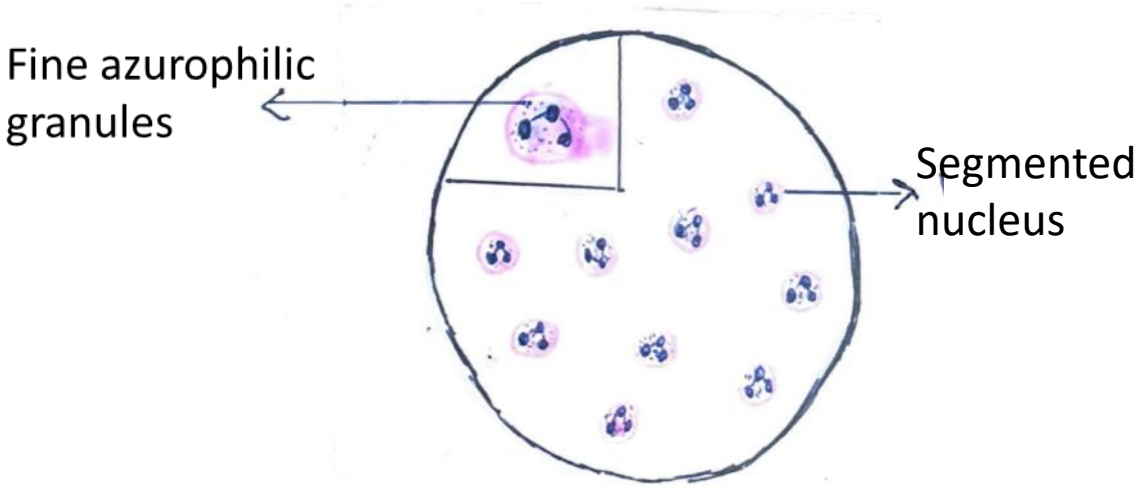
- Neutrophil
- Eosinophil
- Lymphocyte
- Plasma cell
- Macrophage



# NEUTROPHILS

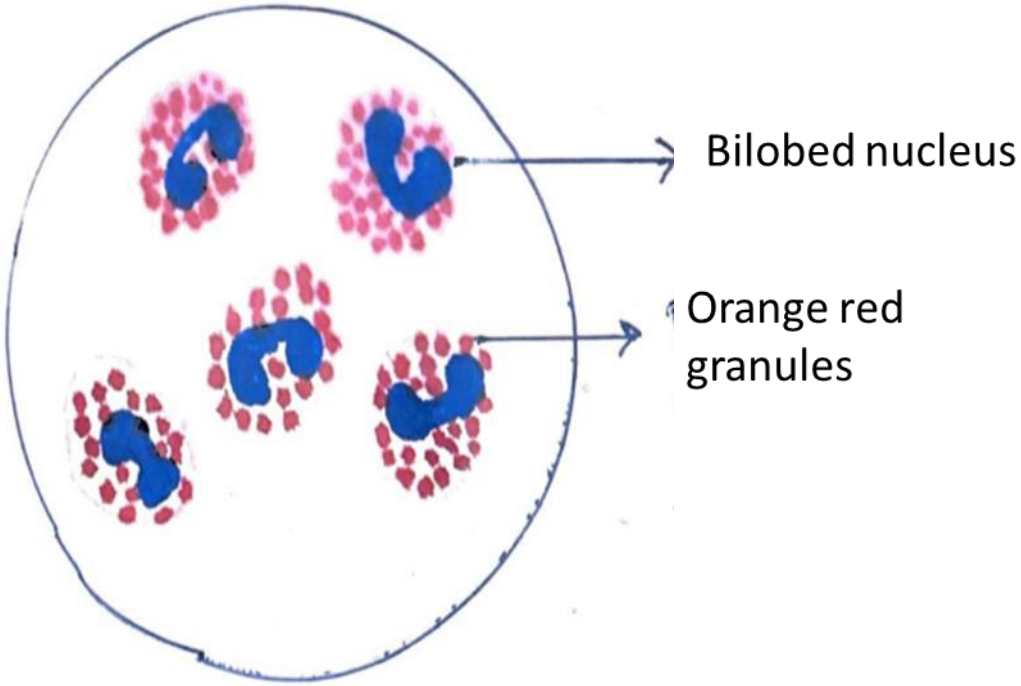
- 12-14um in diameter.
- Segmented nucleus with 2-5 lobes.
- Clumped chromatin with each lobe linked together with a thin chromatin strand.
- Cytoplasm contains dispersed fine azurophilic granules.
- Increased no. of neutrophils are seen in suppurative inflammation



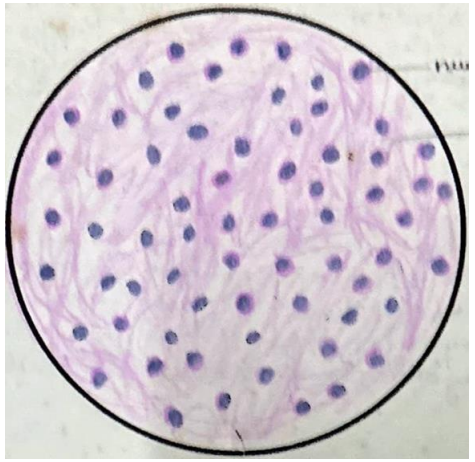
# EOSINOPHILS

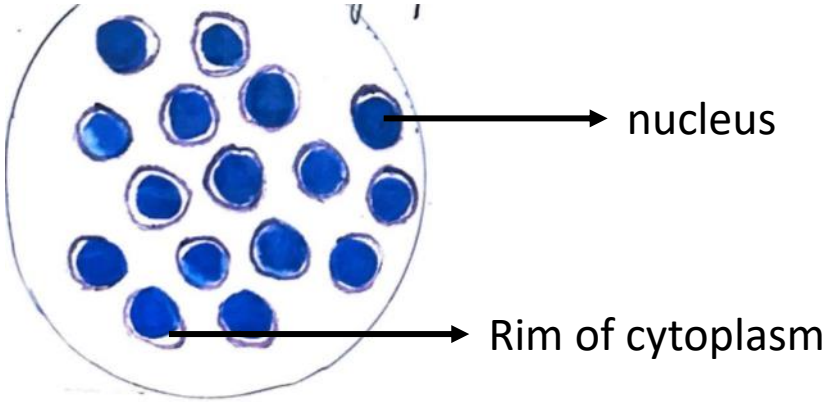
- 12-16um size.
- Bilobed nucleus.
- Cytoplasm contains coarse acidophilic orange-red granules.
- Increased eosinophils are seen in allergic conditions and parasitic infections.



# LYMPHOCYTES

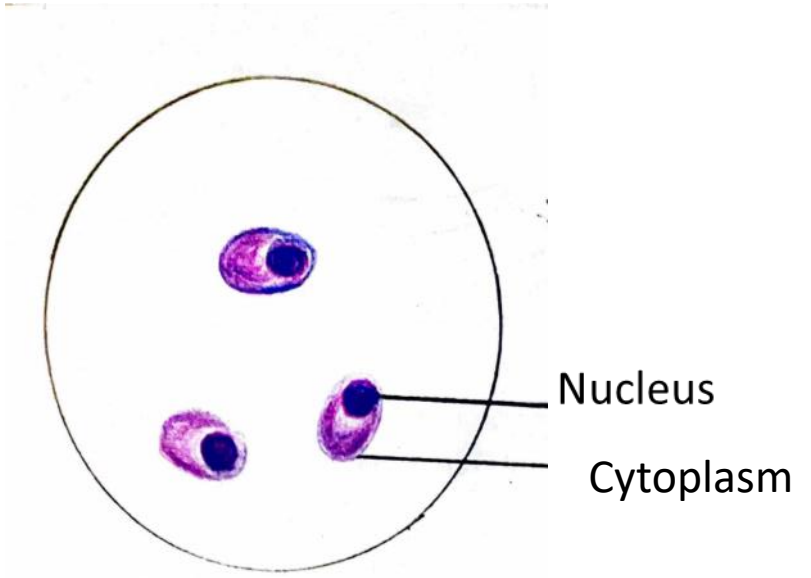
- Smaller than segmented granulocytes.
- Small lymphocytes are 9-12 um.
- Cytoplasm is seen as a thin basophilic rim encircling a round or marginally indented nucleus with very dark staining heavily clumped chromatin.
- Increased lymphocytes are seen in chronic inflammation and immune reactions.

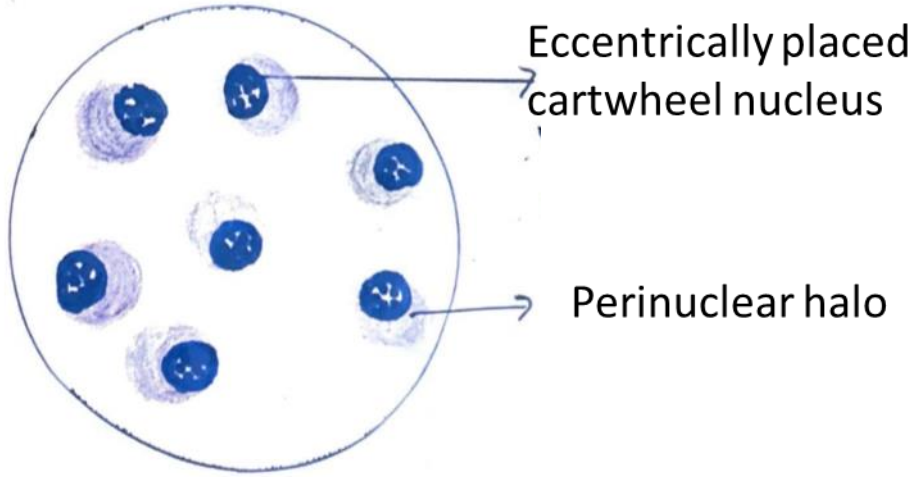




# PLASMA CELLS

- Ovoid cells
- Size 12-20 um
- Eccentrically placed nucleus.
- Course chromatin with a clock faced(cart wheel) pattern.
- Amphophilic cytoplasm with a pale perinuclear area(due to golgi apparutus).
- Seen in chronic inflammatory conditions.



# MACROPHAGES

- Monocytes differentiate into macrophages in tissues (histiocytes).
- Main function is phagocytosis.
- Size: 20-70um.
- Abundant cytoplasm with pseudopods.
- Nucleus reniform, slightly indented, round or oval with spongy/granular chromatin.
- Depending on the site named as –

  Osteoclasts(bone)

  Alveolar macrophages(lung)

  microglial cells(brain)

  histiocytes(connective tissue)

  Kupffer cells(liver)

  Langerhans cells(skin)