

Section - A

Ans 1 → Pineal Gland -

- Pineal Gland is present in the posterior part of Brain.
- It is very small & present near the pituitary gland.
- It produces the melatonin hormone which helps them to sleep & better walk.

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Ans 2 → Protein hormone -

• The proteinaceous hormone are -

→ ACTH (Adrenocorticotrophic hormone)

→ TSH (Thyroid Stimulating hormone)

Function of ACTH -

• ACTH are present in the adrenal gland.

• It has two types - adrenal cortex and adrenal medulla.

- Adrenal gland is present near the kidney,

function of TSH —

Thyroid Stimulating Hormone is present in the thyroid gland.

- It produces thyroxine hormone.
- It is present in the neck region.

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Ans 3 → Menstrual Cycle

- It is present in the human beings.
- It is the cycle of 21 days.
- In this the offspring is produced in the foetus of mammals.

Estrous Cycle

- It is present in the animals.
- It is present once in a year.
- In this the offspring is produced in the form of egg.

Ans 4 → function of Oxytocin —

- It is a Birth Hormone.
- It is used in parturition.
- It helps in contraction of the uterine muscles through the mammary glands.
- It is present in the Neurohypophysis.
- It contracts the muscles of mammary glands for ejection of milk.

Ans 5: Structure & function of liver-

- Liver is present above the stomach & beneath the sternum.
- Liver is the only part which can not recover itself.
- Liver helps in digestion, excretion, respiration etc.
- Liver reabsorbs the nutrients & minerals.

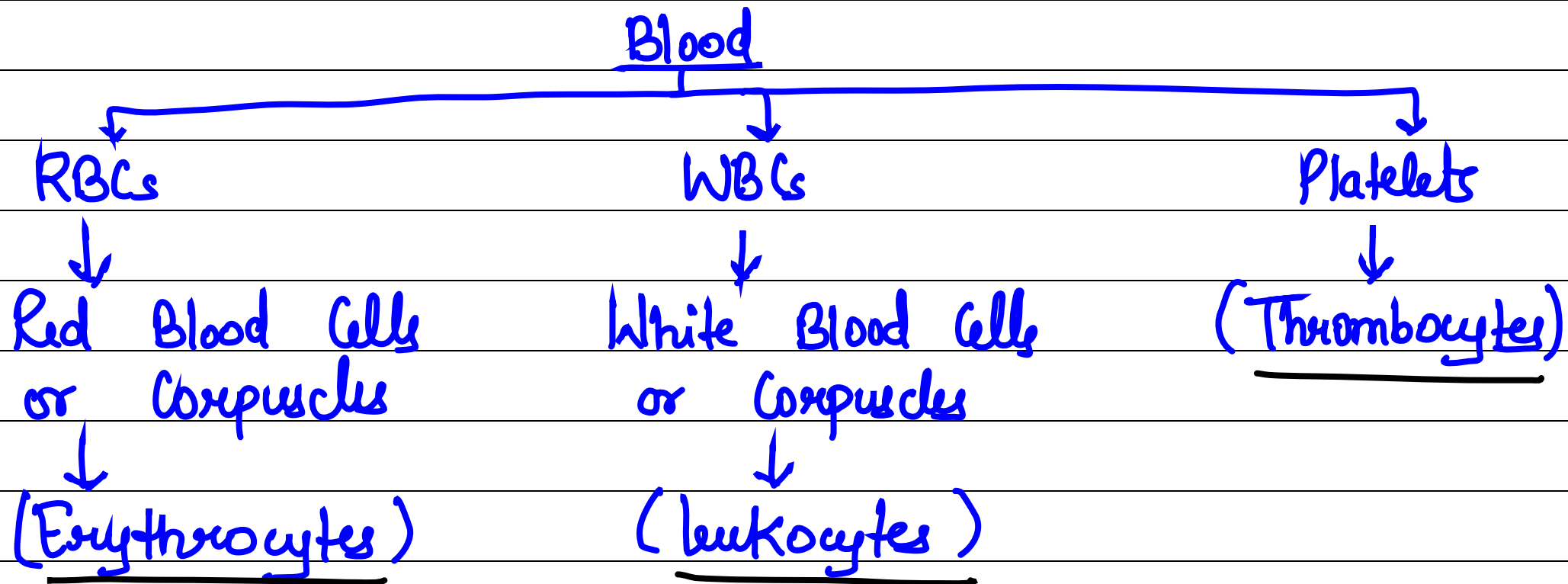
- livers contain the enzymes which help them for proper digestion.

Section - C

Ans 10 →

Blood

- Blood is the fluid connective tissue.





55%



45%

WBCs

Granulocytes

Agranulocytes

↳ Neutrophils

↳ Acidophil

↳ Basophil

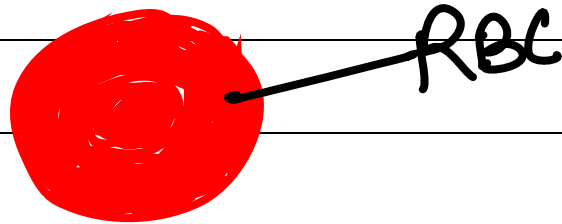
↳ Monocyte

↳

- Blood is a fluid connective tissue.
- In this plasma is present.
- The ratio of RBC & WBC is 600:1
- Blood is red in colour because in blood haemoglobin (Hb) is present -
- Due to the less Hb there is a deficiency of jaundice
- The pH of blood is 7.5 i.e., basic.

RBC - • Red Blood Cells or Corpuscles

• It is also known as erythrocytes.



- In this nuclei are present.

• It is help them to exchange of O_2 & CO_2 .

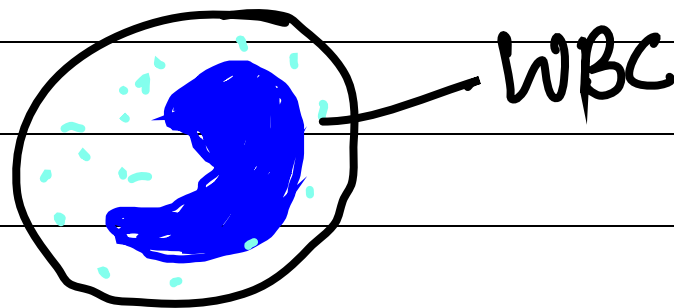
• And it also helps to purify the deoxygenated blood & oxygenated blood.

- It purifies the blood.

WBCs —

- White Blood Cells or Corpuscles.

- It is also known as leukocytes.



- WBC cells prevent our body to the antigens & pathogens which kill our body cells & tissues.

- In this granules are present.

- It protects our body.

Granulocytes :-

- In this granules are present.

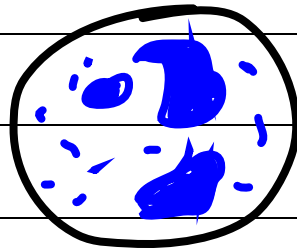
- It is of three types—

Neutrophil —

- It is present in the WBC.

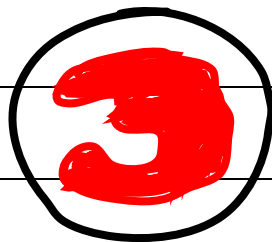
- It is neutral cell.

- It helps them to kill the microbes & antigens.



Acidophil —

- In this those pathogens are killed which is present at the acidic pH or pH 1 to 7.
- It is also the part of WBCs.



Basophil ? -

• In this only those enzymes or antigens are kill which is present in the blood & which is basic in nature i.e., pH 7 to 14.

• It is also the part of WBCs.

• And present in granulocyte.

• In this granules are absent.

Agranulocyte :-

- In this granules are absent.
- It is of two types -
 - Monocyte

Platelets :-

- It is ~~also~~ called thrombocytes.
- It is present in the blood.

- It is very important for our body.
- When platelets is down or minimum then there is deficiency in the body.
e.g. Dengue

Ans 11 →

Thermoregulation

- Thermoregulation is the adaptive features of the living beings or human beings.
- Thermoregulation is a process in which

we maintain the stability of the temperature according to our body.

- Why dogs bask? Why lizards take sunbath?

It is due to warm temperature.

- When the temperature is hot then the animals & human beings change their metabolic rate according to the temperature.

- Beavers, polar bears, & iguanas live in the cold climate & they set their temperature.

Endotherms :-

Endotherms like mammals & birds change their metabolic rate according to their body temperature.

Ectotherms :-

Ectotherms like snake & lizard cannot change their metabolic rate but they adapt the environment in which they live.

Behavioural Strategies :-

The ectotherms & endotherms change their behaviour

according to temperature.

- When there is cold environment then they adapt the cold environment.
- They shivering in the cold environment, rubbing their hands but they adjust themselves in the environment.
- In summer elephant spray the water on our body & other animals seek the shade to hide themselves.

Thermogenesis — Gain or loss of heat

- When there is hot temperature then we gain the cold temperature as quickly as possible to hide ourselves from the sun.
- We adapt the environment.
- We drink cold water in summer & lots of cold drink & ice-cream to maintain our body temperature.
- In winter on our body hairs are

present to protect us.

- In animals & birds, fur and feathers are present to protect them for the summer & winter.

Countercurrent of heat exchange -

In this when the blood flows in the body the speed of the blood provide the warm to the body.

Vasoconstriction :-

In vasoconstriction the blood supply makes body warmer.

- they constrict the body.
- They constrict the blood vessels & then they flow in the body.

Insulation :-

- In this we provide very much other things to protect ourselves.
- The mammals have fur and

feathers & hairs to protect them from the environment.

- The feathers of the bird helps themselves to insulate their body.
- But in men the hair is not useful & it has the goosebumps.
- We rub our hands to insulate our body or we wear the coat in winter season to protect our body.

Section - B

Ans 7 →

