

Mechanism

[DEPTH OF BIOLOGY]

Of Coagulation.

Stoppage of Blood \Rightarrow Haemostasis.

Blood Coagulation / Clotting.

① Activation of Prothombin. [Big step] $\begin{cases} \rightarrow \text{Extrinsic} \\ \rightarrow \text{Intrinsic} \end{cases}$

② Conversion of Pt. \rightarrow Thrombin. [DEPTH OF BIOLOGY]

③ Conversion of Fibrinogen \rightarrow Fibrin.

Ist
Extinsic Pathway \Rightarrow outside the Blood Vessel
(fast pathway)

[DEPTH OF BIOLOGY]

Intrinsic Pathway \Rightarrow Blood Vessel & Coagulation start both
(slow pathway) \rightarrow Ist start.

But, Both Into & Ext. \rightarrow Both goes together.

This 2 pathway activate Ist Prothombin. [DEPTH OF BIOLOGY]

Extrinsic P. [DEPTH OF BIOLOGY]

Intrinsic P.

↓
The damage tissue
release thromboplastin

↓
Blood platelets stick

to damage tissue
and release.

Prothrombinase

Platelet Thromboplastin

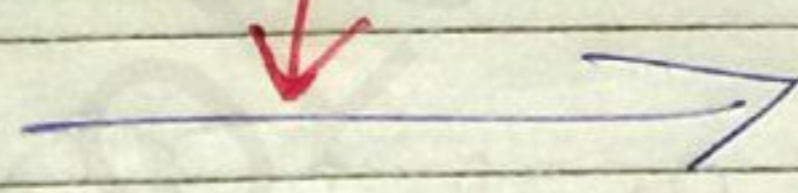
Prothrombinase.

[DEPTH OF BIOLOGY]

Inactivate heparin & Catalyzed.

IInd

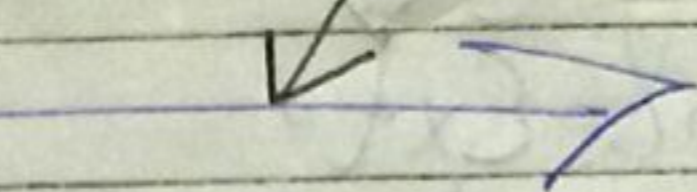
Prothrombin



Thrombin

IIIrd
Step

Fibrinogen



Fibrin. (soluble)

[DEPTH OF BIOLOGY]

XII

Fibrin Clot.

[DEPTH OF BIOLOGY]

[Insoluble]

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Factor affecting Blood Coagulation

[DEPTH OF BIOLOGY]

(↓) se Blood Coagulation

(↑) se Blood Coagulation

- ① Temp. (Low) -
- ② Smooth surface.
- ③ Dry surface.
- ④ $Ca^{+2} \downarrow \downarrow$
- ⑤ By Using Anticoagulant

- ① High Temp.
- ② Rough surface.

[DEPTH OF BIOLOGY]

- ③ Wet surface

- ④ $Ca^{+2} \uparrow \uparrow$

- ⑤ Thromboplastin
or
Thrombin.