Topic: Blood Clotting mechanism
Class: B.Sc Part –III (Hons.)
Paper– V
Group – B

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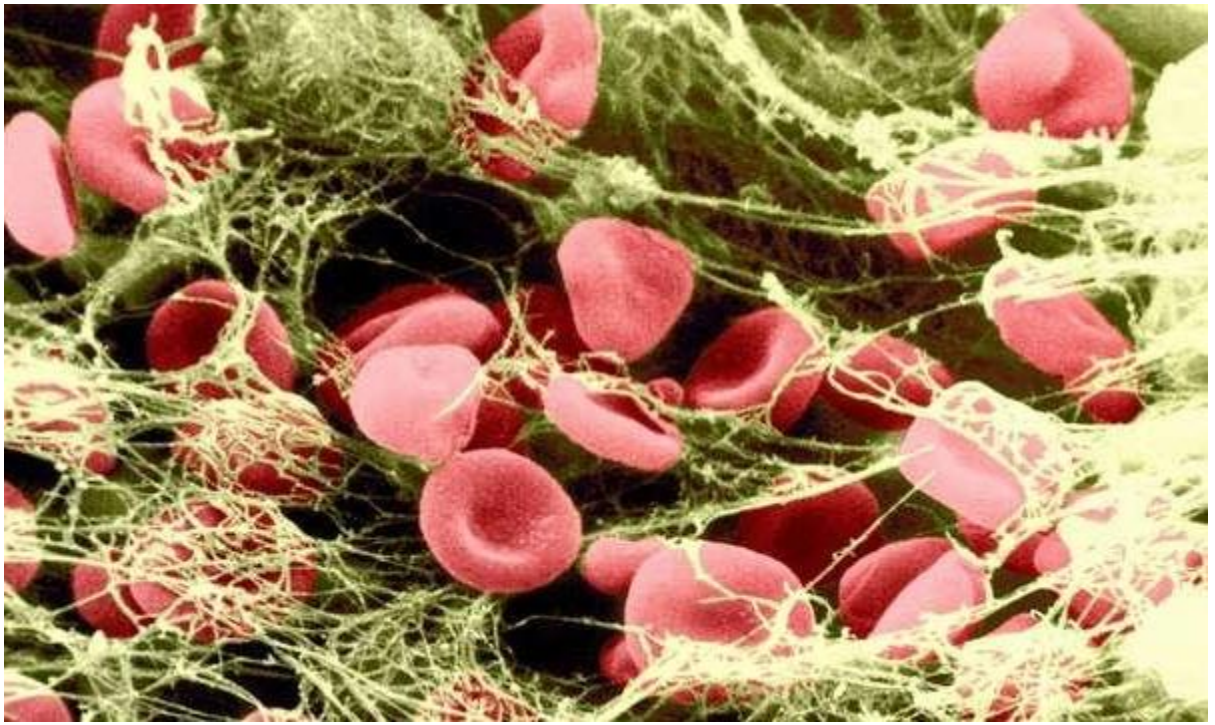
Blood clotting or coagulation, is an important process that prevents excessive bleeding when a blood vessel is injured. Platelets and proteins in plasma work together to stop the bleeding by forming a clot over the injury.

- The process by which a blood clot is formed. The formation of a clot is often referred to as secondary hemostasis, because it forms the second stage in the process of arresting the loss of blood from a ruptured vessel.

Fig; Fibrin in blood clotting



- [Red blood cells (erythrocytes) trapped in a mesh of fibrin threads.]
- The first stage, primary hemostasis, is characterized by blood vessel constriction (vasoconstriction) and platelet aggregation at the site of vessel injury.

- Clotting is a sequential process that involves the interaction of numerous blood components called **coagulation factors.**

- There are 13 principal coagulation factors in all, and each of these has been assigned a Roman numeral, I to XIII.

- Coagulation can be initiated through the activation of two separate pathways, designated **extrinsic and intrinsic**. Both pathways result in the production of factor X.

- The activation of this factor marks the beginning of the so-called **common pathway** of coagulation, which results in the formation of a clot.