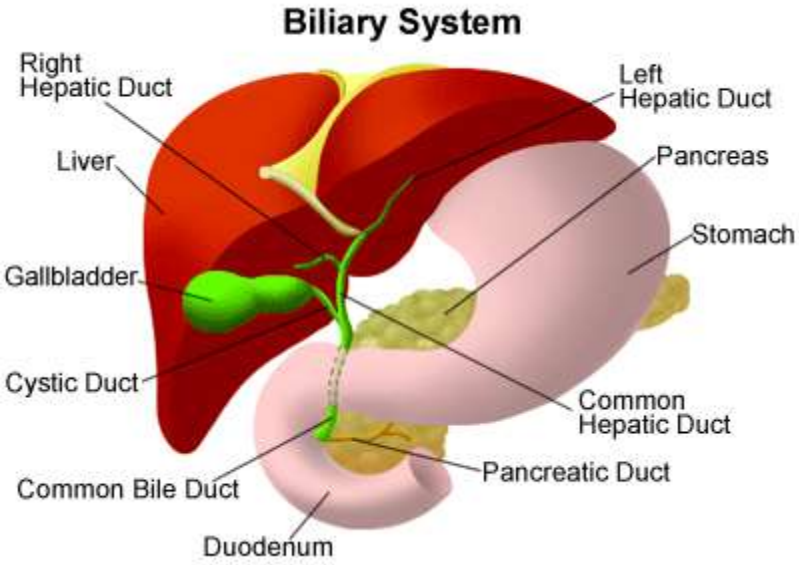
MJF AYURVEDA MAHAVIDYALAYA
Chomu, Jaipur

BILIARY APPARATUS



Presented by-
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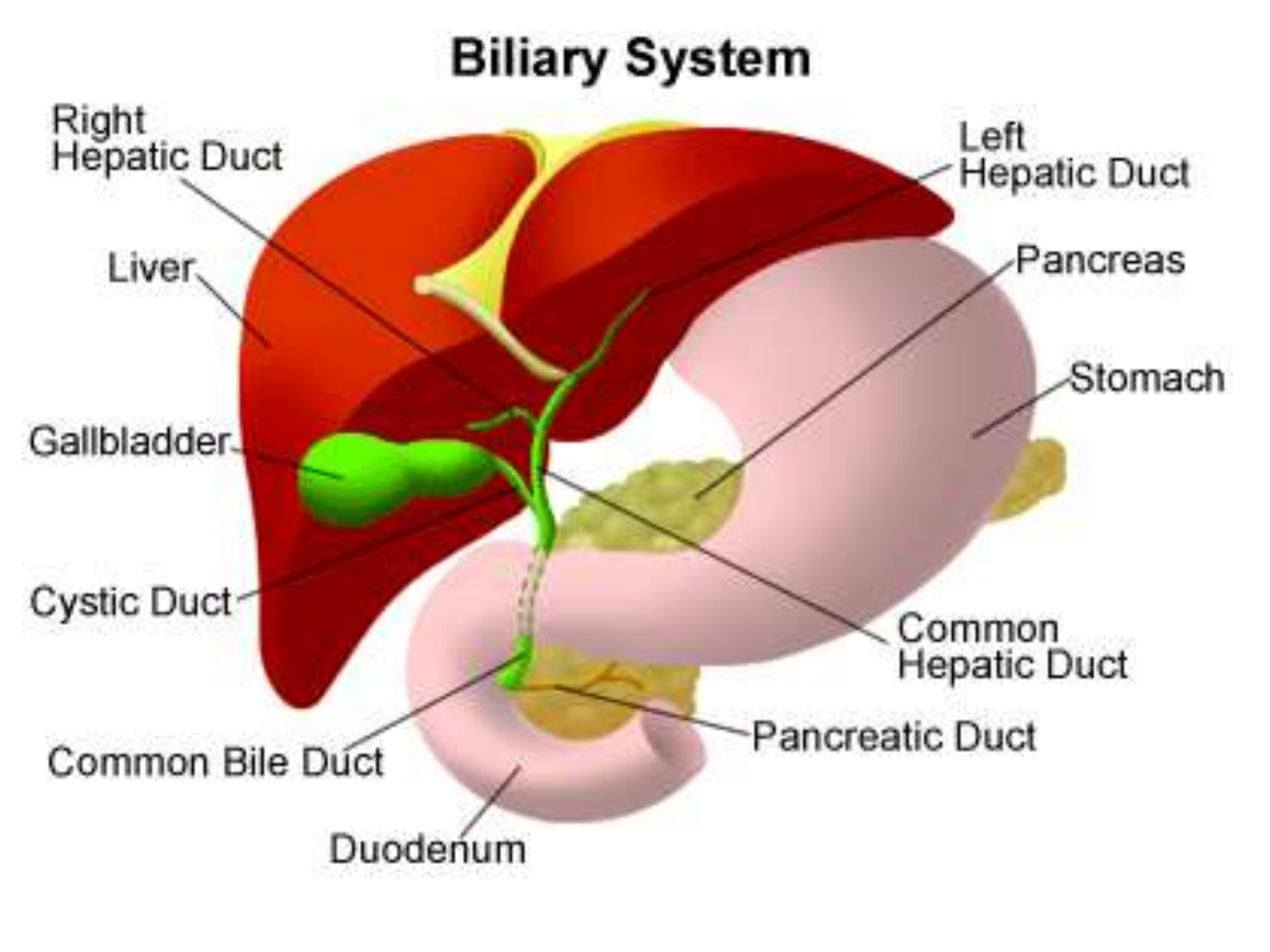
PO (Programme outcome)	CO (Course outcome)
PO 1-Demonstrate comprehensive knowledge and application of the Trisutraconcept to explore root causes, identify clinical manifestations of disease to treat alments and maintain heathy status	CO6- Explain and demonstrate the gross anatomy of the organs of various systems and their applied anatomy in perspective of Ayurveda and Modern science
PO 2-Demonstrate knowledge and skills in Ayurveda, acquired through integration of multi disciplinary perspectives and keen observation of clinical and practical experiences.	

- Teaching Learnings method-Lecture with power point presentation
- Domain-Cognitive –Psychomotor
- Must to know/desirable to know/Nice to know-Must to know
- Millers pyramid-Knows and shows how
- Bloom texonomy-Remember and Understand


Biliary System
Right Hepatic Duct
Left Hepatic Duct
Liver
Pancreas
Stomach
Gallbladder
Cystic Duct
Common Hepatic Duct
Pancreatic Duct
Common Bile Duct
Duodenum

- **The biliary apparatus collects bile from the liver, stores it in the gall bladder, and transmits it to the second part of the duodenum.**

The apparatus consists of

(1) right and left hepatic ducts,

(2) common hepatic duct,

(3) gall bladder,

(4) cystic duct,

(5) bile duct

hepatic Ducts

- **The right and left hepatic ducts emerge at the porta hepatis from the right and left lobes of the liver.**

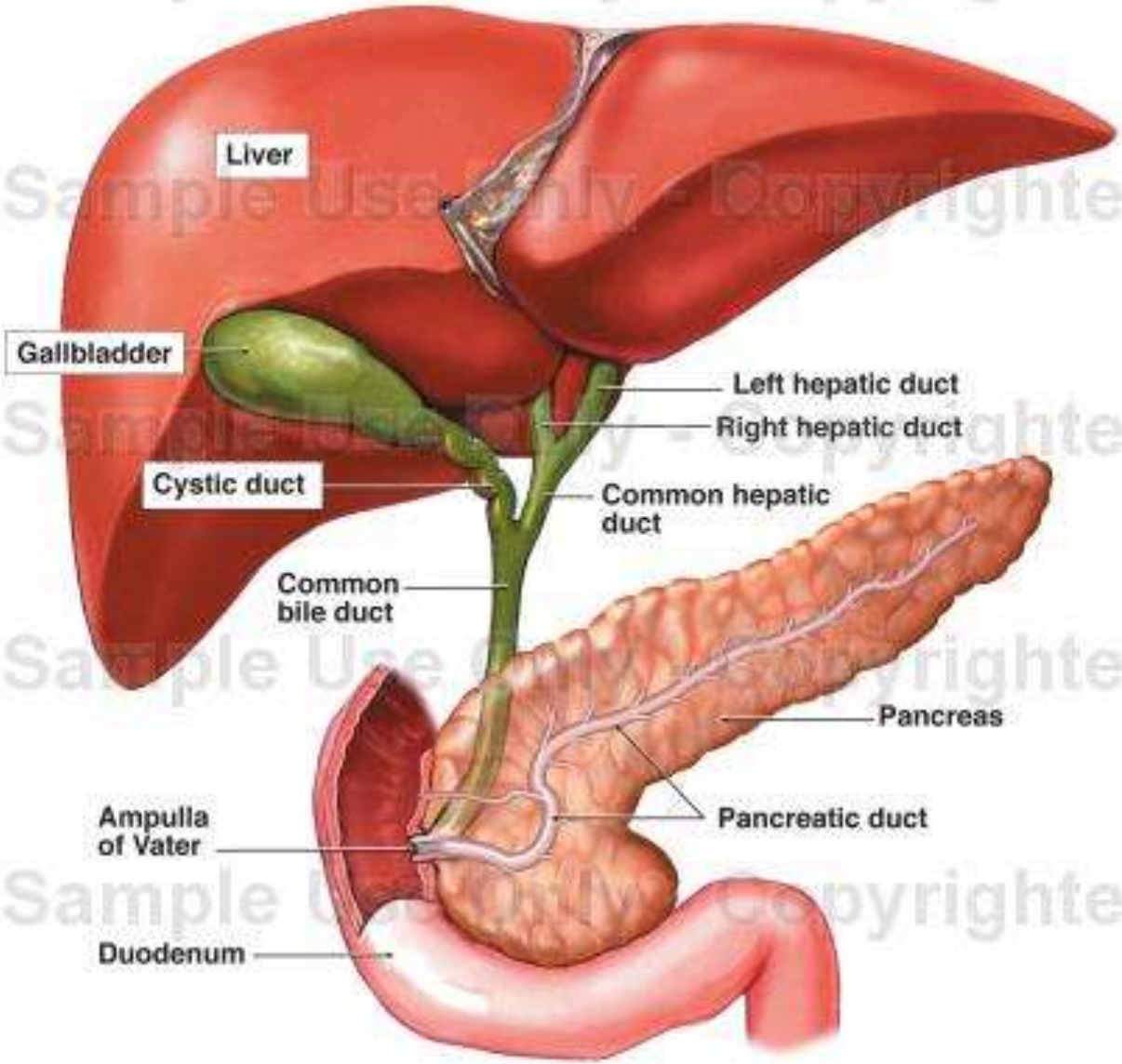
Common Hepatic Duct

- **It is formed by the union of the right and left hepatic ducts near the right end of the porta hepatis. It runs downwards for about 3 cm and is joined on its right side at an acute angle by the cystic duct to form the bile duct.**

Gall bladder

- **pear-shaped, reservoir of bile, situated in a fossa on the inferior surface of the right lobe of the liver.**
- **Dimensions and Capacity - 7 to 10 cm long, 3 cm broad at its widest part, and about 30 to 50 ml in capacity**

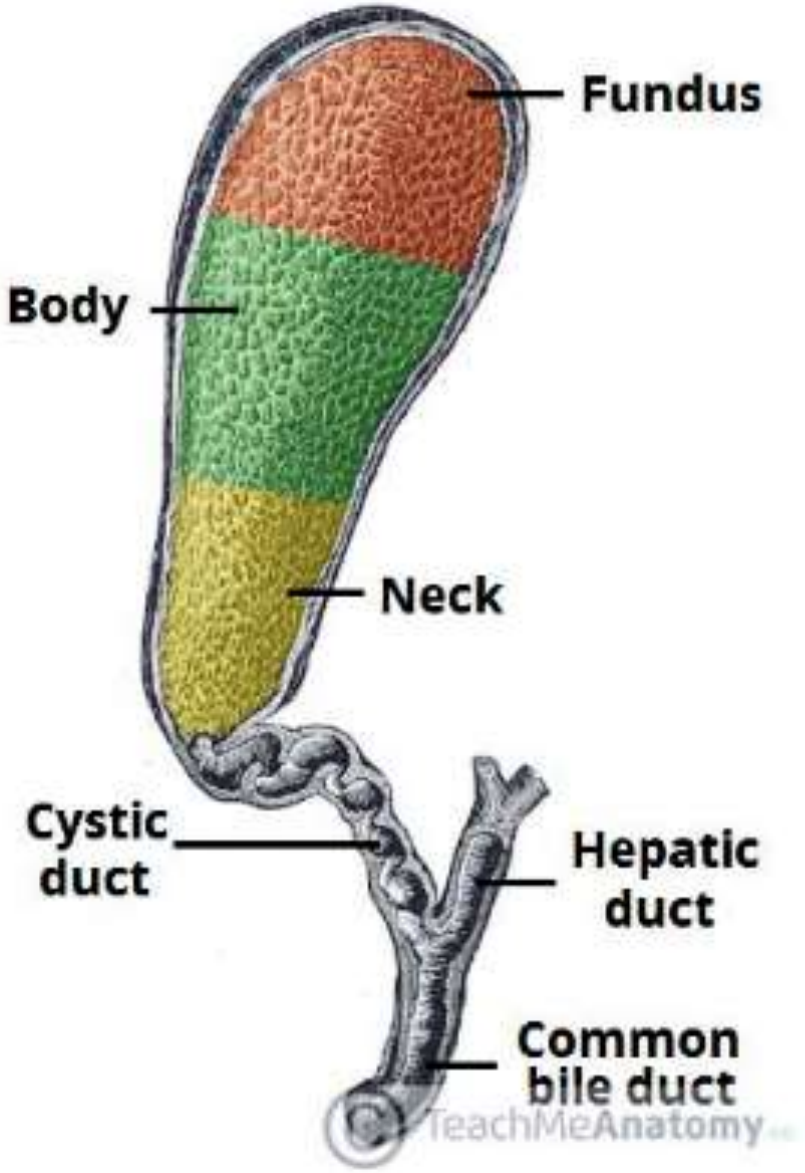
Anatomy of the Hepatic and Pancreatic Ducts



Parts- It is typically divided into three parts:

1. **Fundus – the rounded, distal portion of the gallbladder. It projects into the inferior surface of the liver in the mid-clavicular line.**
2. **Body – the largest part of the gallbladder. It lies adjacent to the posteroinferior aspect of the liver.**
3. **Neck – the gallbladder tapers to become continuous with the cystic duct, leading into the biliary tree.**

The neck contains a mucosal fold, known as Hartmann's Pouch. This is a common location for gallstones to become lodged, causing cholestasis.


Fundus
Body
Neck
Cystic duct
Hepatic duct
Common bile duct
TeachMeAnatomy

Arterial supply- cystic artery – a branch of the right hepatic artery .

Venous drainage of the neck of the gallbladder is via the cystic veins, which drain directly into the portal vein. Venous drainage of the fundus and body of the gallbladder flows into the hepatic sinusoids.

Innervation

- **sympathetic- coeliac plexus**
- **parasympathetic vagus nerve**

Cystic Duct

- **about 3 to 4 cm long.**
- **It begins at the neck of the gall bladder, runs downwards, backwards and to the left, and ends by joining the common hepatic duct at an acute angle to form the bile duct.**

Bile duct

- **common hepatic duct and cystic duct combine to form the common bile duct.**
- **The common bile duct descends and passes posteriorly to the first part of the duodenum and head of the pancreas. Here, it is joined by the main pancreatic duct, forming the hepatopancreatic ampulla (commonly known as the ampulla of Vater) – which then empties into the duodenum via the major duodenal papilla. This papilla is regulated by a muscular valve, the sphincter of Oddi.**

Formative Assesment

1. Define the biliary apparatus and Name its main components.
2. Describe the formation and course of the common bile duct.
3. Write the anatomical relations of the gallbladder.
4. Mention the blood supply and nerve supply of the gallbladder.
5. Write short notes on the sphincter of Oddi.
6. Describe the extrahepatic biliary ducts.