



All lecture of practical OSPE file (Respiratory block)



Red: questions.

Dark red: very important.

Black: complete answers.

Gray: notes | extra.

Editing file

➤ You should know before the exam:

- The diagrams in these slides are going to be the **same** in the exam however, it may not be coloured.
- You have to **mention the full name** always and **don't use shortcuts** you could lose marks because of that.
- The **Arrows** in the diagrams are **very important** .
- So please study them well.



Nasal cavity and septum

Q1: Identify the structure?

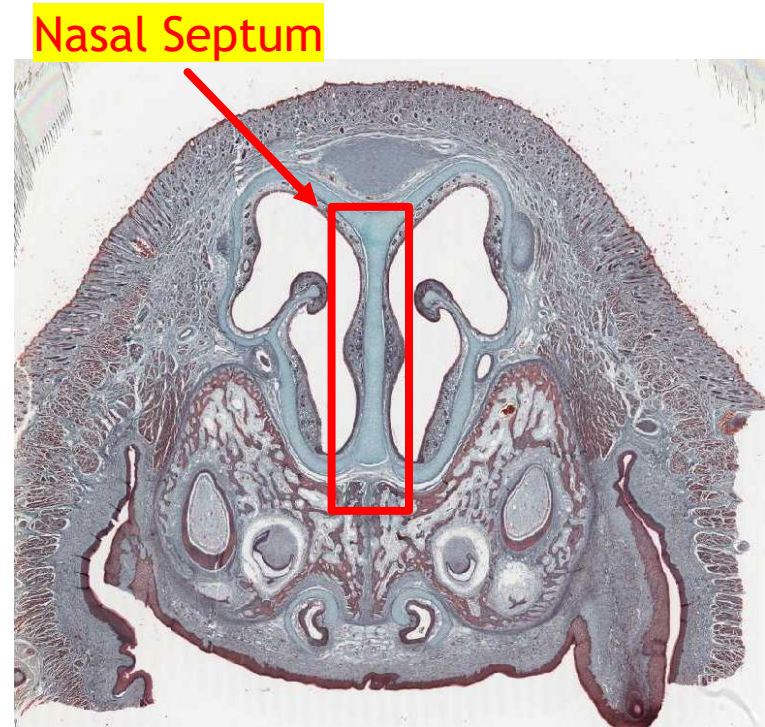
Nasal cavity and septum

Q2: What is the lining epithelium?

Pseudo-stratified ciliated columnar epithelium with goblet cells

Q3: What is the type of cartilage found in this structure?

Hyaline cartilage



Olfactory mucosa

Q1: Identify the structure?
Olfactory Mucosa

Q2: What is the lining epithelium?
pseudo-stratified columnar epithelium
This type of epithelium is found on roof of nasal cavity.

Q3: What are the type of cells found in olfactory epithelium?

- Bipolar neurons
- Sustentacular (supporting) cells
- Basal cells



Respiratory mucosa

Q1: Identify the structure?

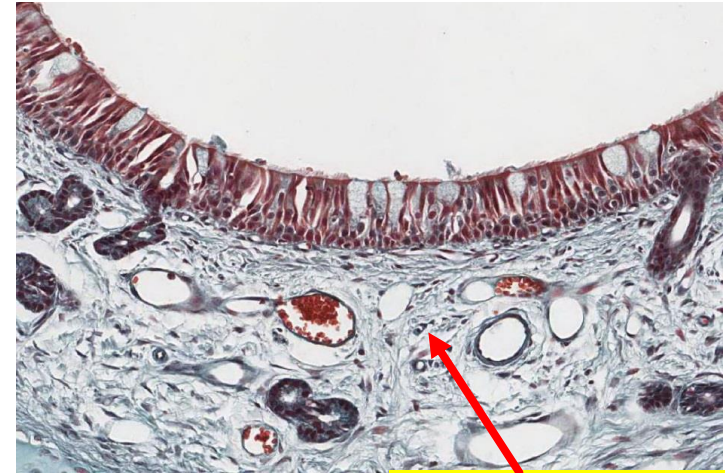
Respiratory mucosa

Q2: What is main structure of this mucosa?

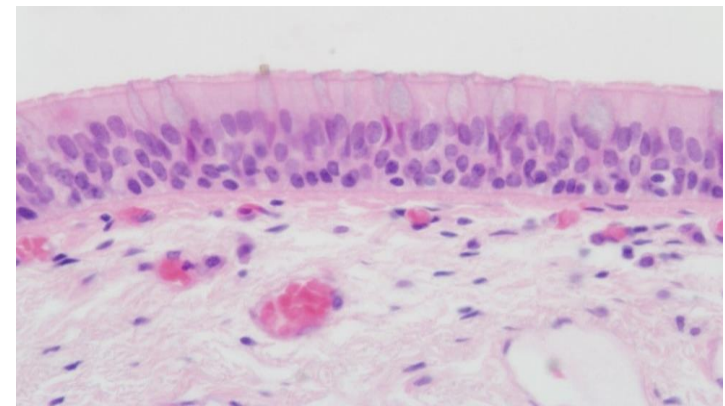
- 1) Lining respiratory epithelium
- 2) C.T. lamina propria rich in seromucous glands, vascular plexuses, and lymphoid elements

Q3: What is the lining epithelium?

Pseudo-stratified ciliated columnar epithelium with goblet cells



Seromucous glands



The Epiglottis

Q1: Identify the structure?

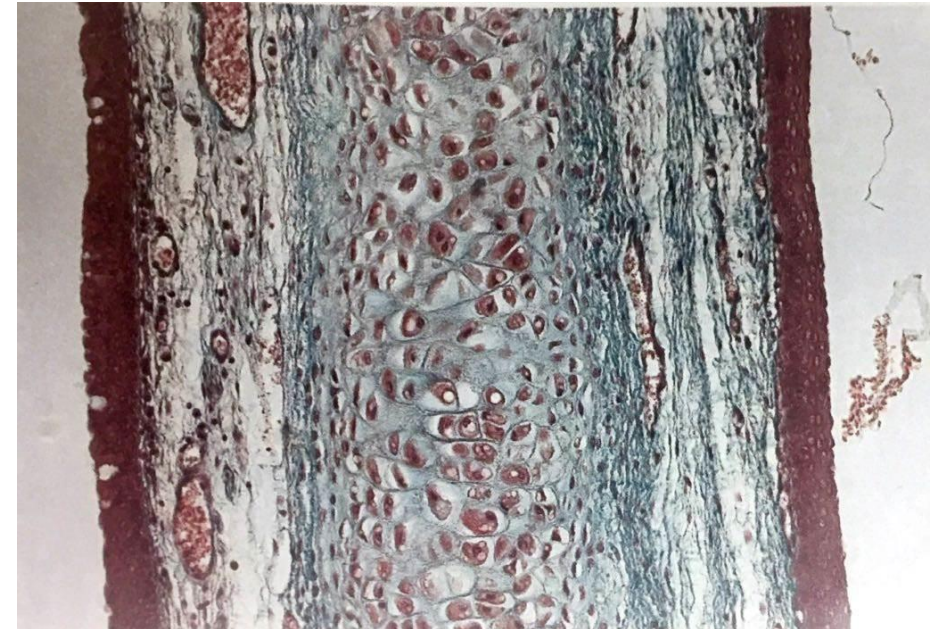
The epiglottis

Q2: What is the lining epithelium?

- Anterior: stratified squamous epithelium non keratinized
- Posterior: pseudo stratified columnar epithelium

Q3: What is the type of cartilage found in this structure?

Elastic cartilages



Trachea

Q1: Identify the structure?

Trachea

Q2: What is the lining epithelium?

Pseudo-stratified ciliated columnar epithelium with goblet cells

Q3: What are the layers of this structure?

- Mucosa
- Submucosa
- adventitia

Q4: What is the type of cartilage found in this structure?

C-shaped rings of hyaline cartilage in the adventitia



Tracheal mucosa

Q1: Identify the structure?

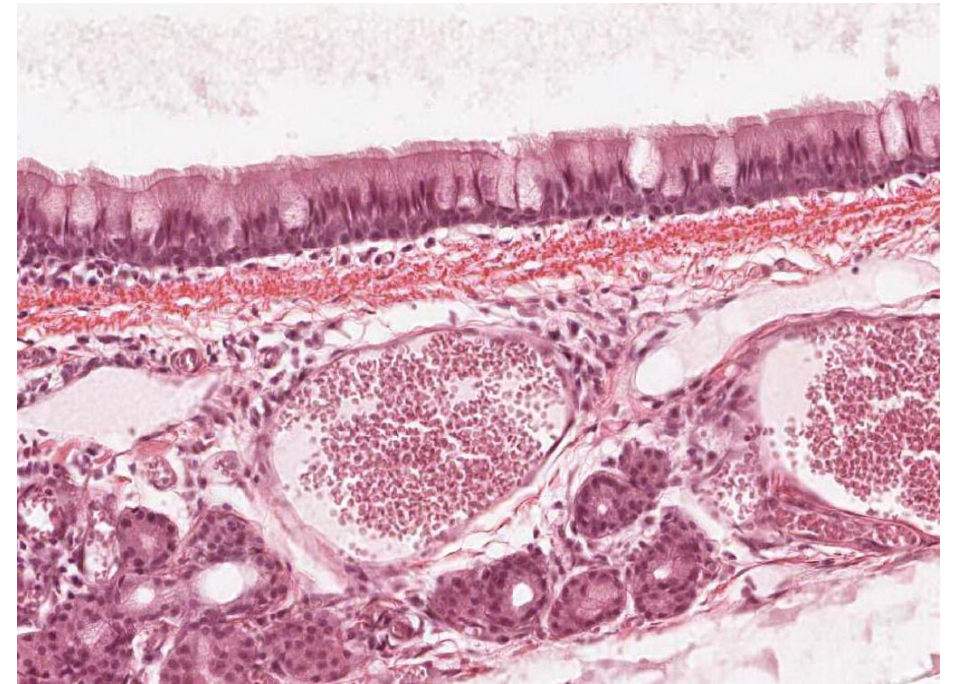
Tracheal mucosa

Q2: What is the lining epithelium?

Pseudo-stratified ciliated columnar epithelium with goblet cells

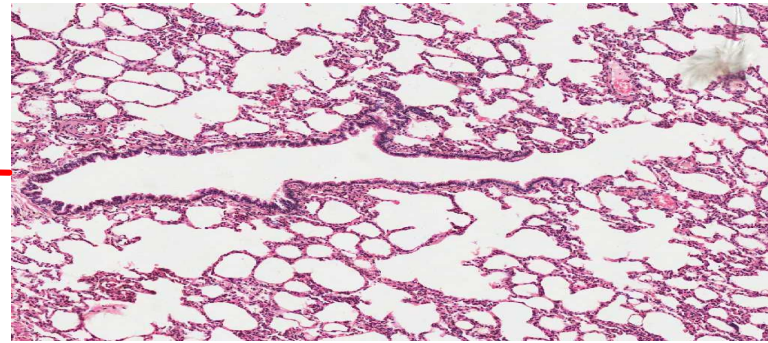
Q3: What are the contents of the submucosa of this structure?

- Numerous Mucous & seromucous glands
- Lymphoid elements
- Connective tissue

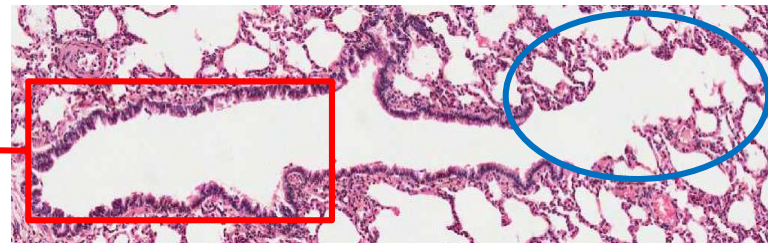


YOU SHOULD KNOW THE DIFFERENT STRUCTURES IN THIS PICTURE

Lung

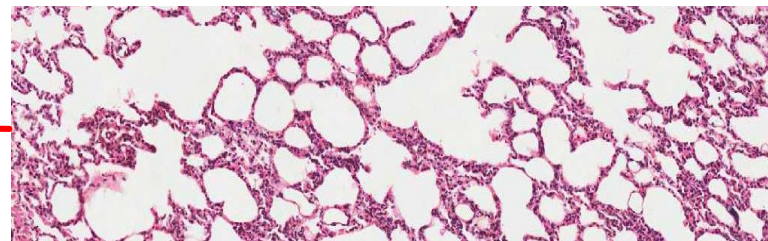


Terminal
Bronchiole



Alveolar duct

Pulmonary
alveoli



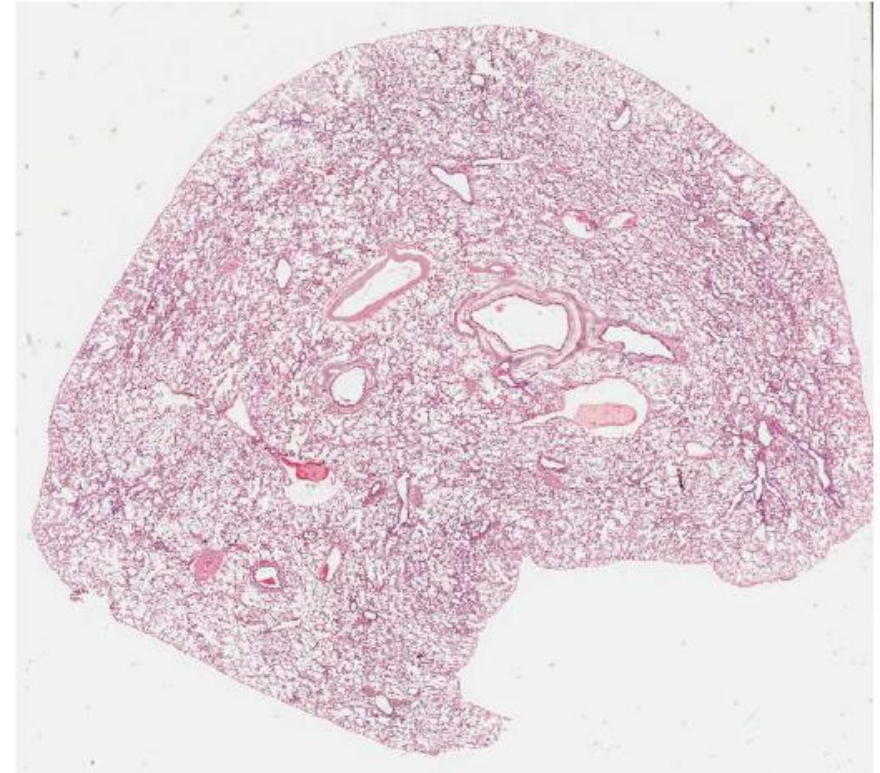
Lung

Q1: Identify the structure?

The Lung

Q2: What are the contents of the structure?

- Intrapulmonary bronchi
- Bronchioles
- Pulmonary Alveoli



Intrapulmonary bronchus

Q1: Identify the structure?

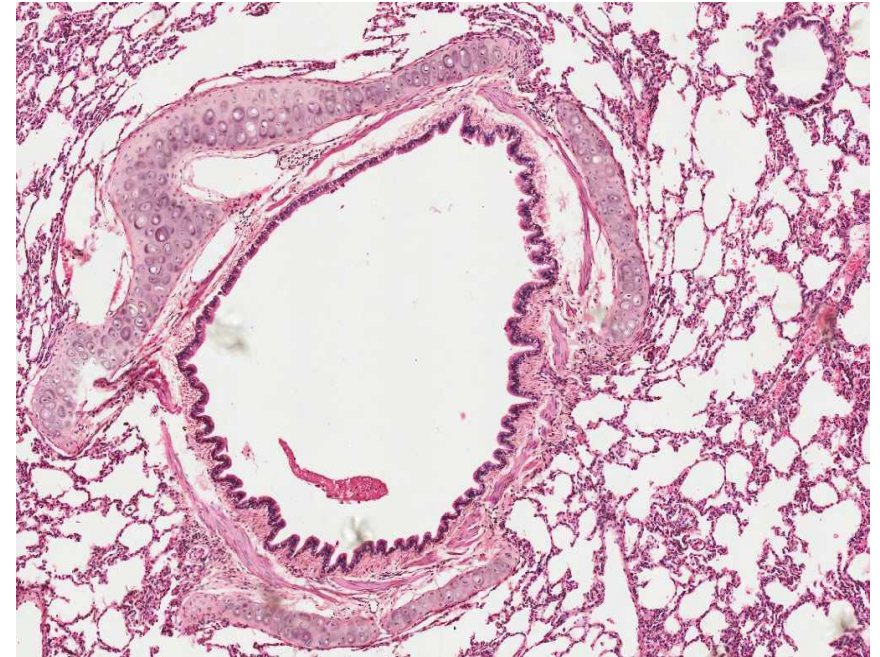
Intrapulmonary bronchus

Q2: What is the lining epithelium?

Pseudo-stratified ciliated columnar epithelium with goblet cells

Q3: What is the type of cartilage found in this structure?

Plates of hyaline cartilage



Terminal bronchiole

Q1: Identify the structure?

Terminal Bronchiole

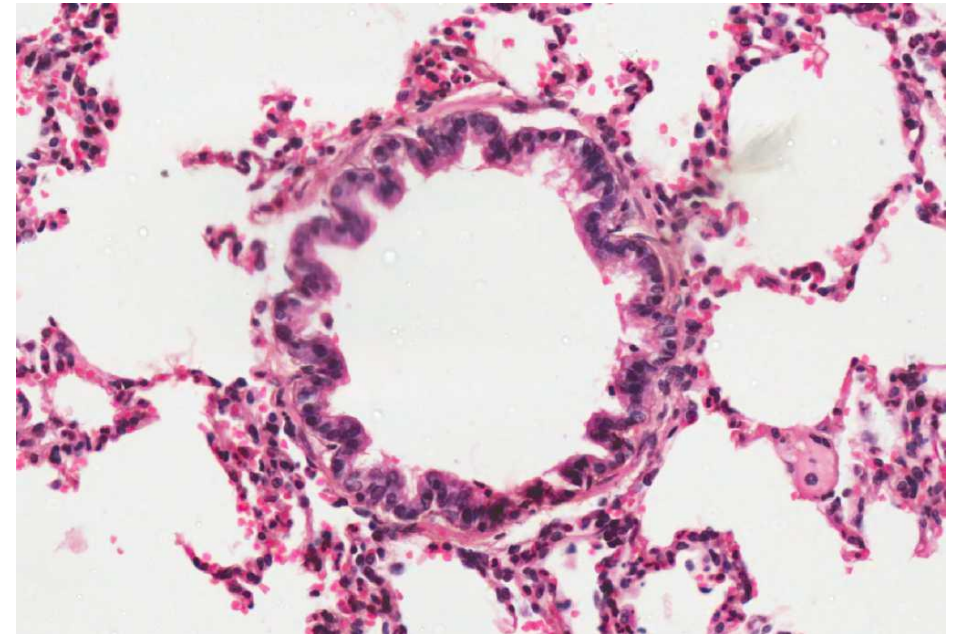
Q2: What is the lining epithelium?

Simple cuboidal partially ciliated epithelium with Clara cells

NO GOLBET CELLS

Q3: What is the function of clara cells?

- Degrade toxins in inhaled air (immune cell like function)
- Divide to regenerate the bronchiolar epithelium
- Produce surfactant-like material



Pulmonary alveoli

Q1: Identify the structure?

Pulmonary Alveoli

Q2: What is the lining epithelium?

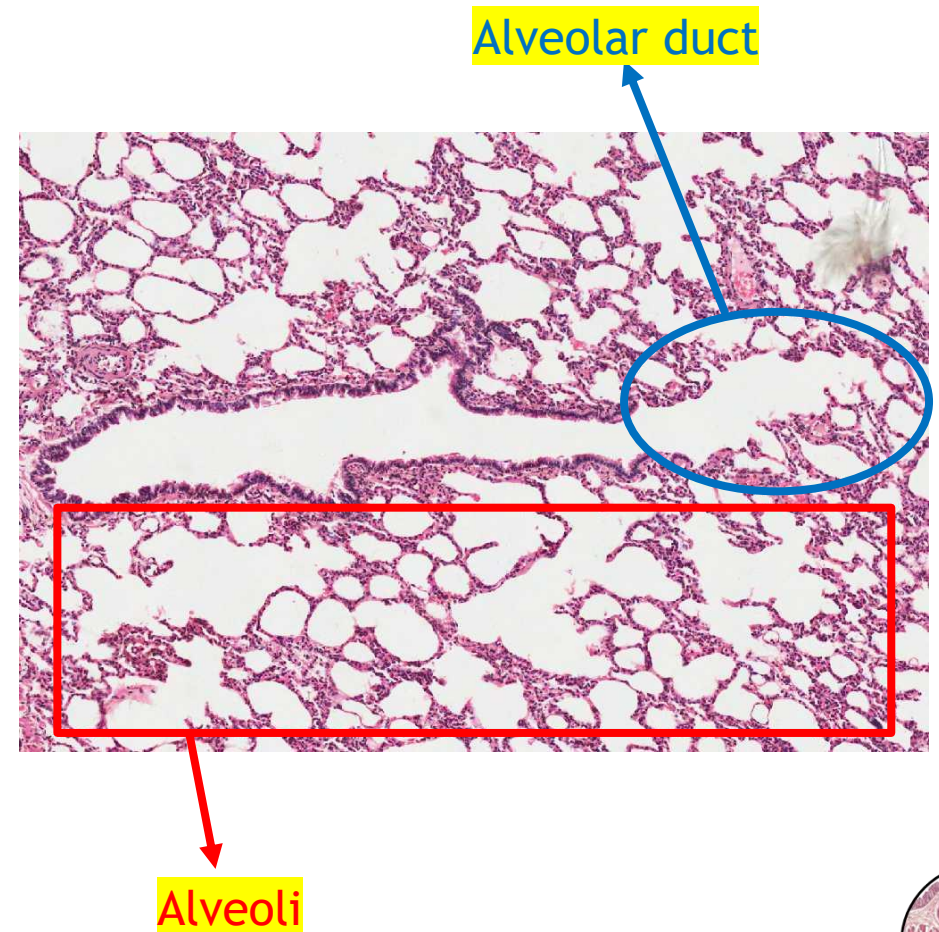
Simple squamous epithelium

Q3: What are the types of cells found in the Alveolar epithelium?

- Type I Pneumocytes
- Type II Pneumocytes

Q4: What are the compartment of the blood-gas barrier?

- Surfactant
- Type I Pneumocyte
- Fused basement membrane of both type I pneumocyte and endothelial cells of pulmonary capillaries
- Endothelial cells



From Dr.Raeesa

	Type I Pneumocytes	Type II Pneumocytes
Structure	Simple squamous “flattened” no lamellar bodies	Cuboidal “rounded” have lamellar bodies
Number	Less than type II	More numerous than type I
Function	Gas exchange	Secrete surfactant

What is the differences between intrapulmonary bronchus and the bronchiole?

1. Bronchiole has not cartilage
2. Bronchiole is more rich in smooth muscle bundles
3. No seromucous glands or lymphoid nodules in bronchioles
4. in bronchioles the lining epithelium is simple type
5. Goblet cells are less in number in the bronchioles

" سنين الجهد إن طالت ستطوى .. لها أمدٌ وللأمد إنتضاءٌ
لنا بالله آمال وسلوى .. وعند الله ما خاب الرجاء "

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