



IQRA NATIONAL UNIVERSITY

DEPARTMENT OF ALLIED HEALTH SCIENCES

Final-Term Examination(Summer-20) (BS. Dental, Rad, MLT)

Course Title: Human Anatomy-I Instructor: Ms. Maria Feroze

Time: 4 hours.

Name Madiha ID 16265

Max Marks: 50

Note:

- **Attempt all questions from this section, all questions carry equal marks.**
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Q1: Explain the mechanism of breathing.

Q 2: What do you know about the origin of diaphragm?

Q3: Classify the ribs according to their attachments to the sternum.

Q4: What do you know about the general features of first rib?

Q5: How is the mediastinum divided?

Q6: Briefly discuss the structure of lungs.



(Understanding The Question Paper Is Also Part Of Examinations)

Q1: Explain the mechanism of breathing.

Mechanism of Breathing

They needs not to be taught and that includes the very first instinct of survival our first breath our lungs were never taught how to breathe.

It's astounding that one doesn't need to learn how to smell, how to see or how to breathe to be able to perform any of these functions. Regardless of whether we know the mechanism of these involuntary functions or not, it is imperative that we comprehend its functioning since these are mechanisms that facilitate our survival.

Q 2: What do you know about the origin of diaphragm?

ANSWER

The diaphragm in the thorax is called the thoracic diaphragm and serves as an important anatomical landmark that separates the thorax or chest from the abdomen. It functions during breathing when it contracts to enlarge the thoracic cavity and reduces the intrathoracic pressure so that lungs may expand and fill their alveoli with air. It is a dome-shaped muscle and tendons that function as the main muscle of respiration and is essential to the breathing process. It is a fibromuscular sheet that has a convex upper surface that forms the floor of the thoracic cavity and a concave under surface to form the roof of the abdominal cavity. The esophagus, phrenic and vagus nerves, descending aorta, the inferior vena cava pass through the diaphragm between the thoracic and abdominal cavities. The diaphragm is asymmetric with the left side slightly more inferior than the right, chiefly because of the presence of the liver located on the right. The left side may also be partially inferiorly located because of the push by the heart.

Q3: Classify the ribs according to their attachments to the sternum.

Ans. Classification of the ribs according to their attachments to The world is not the Resting place..it's the Testing place ..be ready and

best of lucke ribs... upper seven ribs (their anterior end is attached to the sternum)

A. False ribs... lower five ribs (the are not attached anteriorly to the sternum)

- The lower two ribs are called the floating ribs because they are free anteriorly.

Q4: What do you know about the general features of first rib?

Ans.

The first rib is the most curved and usually the shortest of all the ribs it is board and flat its surface looking upward and downward and its borders inward and outward. The head is small rounded the possesses only a single articular facet for articulation with the body of the first thoracic vertebrae.

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- The head is small rounded and possesses only a single articular facet for articulation with the body of the first thoracic vertebrae. The neck is narrow and rounded. The tubercle thick and prominent is placed on the outer borders. There is no angle but at the tubercle the rib is slightly bent with the convexity upward so that the head of the bone is directed downward . The upper surface of the body os marked by two shallow grooves separated from each other by a slight ridge prolonged internally into a tubercle the scalene tubercle for the attachment of the scalenus anterior the anterior grooves transmits the subclavian vein the posteririthe subclavian artery_ and the trunk of the brachial plexus .behind the posterior_groove is a rough area for the attachment_of the scalenus medius. The under surface is smooth and destitue of a costal groove the outer borderies convex thick and rounded and at its posterior part gives attachment to the first digitation of the serratus anterior the inner border is concave thin and sharp and marked about its center by the scalene tubercle. The anterior extremity is larger and thicker than that any of the other ribs.

The first rib is the most superior of the twelve ribs it is an atypical rib and is an important anatomical landmark it is one of the borders of the superior thoracic aperture the ribs form the main structure of the thoracic cage that protects the thoracic organs.

Q5: How is the mediastinum divided?

Ans. Division of mediastinum .

- Superior mediastinum - extends upward terminating at the superior thoracic aperture
- Inferior mediastinum - extends downward terminating at the diaphragm

The inferior mediastinum is further subdivided into the

Middle mediastinum. Which consists of the pericardium and heart .

Anterior mediastinum. Which is a space between the pericardium and the sternum and

Posterior mediastinum. Which lies between the pericardium and the vertebral column.

Q6: Briefly discuss the structure of lungs ?

Lungs structure.

- The lungs are roughly cone shaped with an apex base three surfaces and three borders. The left lung slightly smaller than the right. This is due to the presence of the heart
- Each lung consists of:
- **Apex** – the blunt superior end of the lungs it projects upward above the next level of the 1st rib and into the floor of the neck
- **Base** – the inferior surface of the lung which sits on the diaphragm ●
- **Lobes** – (two or three) there are separated by the fissures within the lung.

Lobes

- The right and left lungs do not have an identical lobular structure

- The right lung has three lobes superior middle and inferior. The lobes are divided from each other by two fissures.
- The left lung has two lobes . The lobes are divided from each other by oblique fissures.