



MID RS 020 EXAM

Collected by:

Anas Khraim
Rahaf Turab
Haitham Al-Saifi

Pathology:

1) Regarding atelectasis:

- A. In resorption atelectasis, the mediastinum shifts toward the atelectatic lung.
- B. Accumulation of mucus in bronchi is the most common cause of atelectasis in kids.
- C. Air in the parietal cavity causes contraction atelectasis.
- D. All forms of atelectasis are reversible and curable.

Answer: A

2) Regarding ARDS, which of the following is correct?

- A. It is the milder form of acute lung injury.
- B. The most common cause is pancreatitis
- C. It is characterized by the presence of hyaline membrane in the organizing stage.
- D. Sepsis is indicative for poor prognosis
- E. It is related to cardiac causes

Answer: D

Anatomy:

1) Vocal ligament formed by:

- A. Cricothyroid ligament
- B. Quadrangular membrane
- C. Conus elasticus
- D. Thyrohyoid membrane

Answer: C

2) Vagus nerve proximal to recurrent laryngeal nerve is injured, which of the following is most likely to happen?

- A. Bronchoconstriction
- B. Decrease heart rate
- C. Dilatation of the bronchial lumen
- D. Constriction of coronary arteries

Answer: C

3) 42-year-old patient has a tumor superior to the hilum of the left lung, which of the following is most affected:

- A. Arch of aorta
- B. Superior vena cava
- C. Azygos vein
- D. Left brachiocephalic vein
- E. descending aorta

Answer: A

4) A man has a pneumothorax, in midaxillary...Where to place the needle

- A. between rib 6 and 8
- B. between rib 8 and 10
- C. between rib 9 and 11

Answer: B

5) An oral fistula after sinusitis is caused by:

- A. sphenoidal
- B. Maxillary (ans)
- C. Ethmoidal
- D. Frontal

Answer: B

6) which of the following sites don't cause pneumothorax?

- A. Puncture in 9th intercostal space midaxillary
- B. Puncture in 9th intercostal space midclavicular

Answer: B

7)which of the following nerves doesn't supply the lateral wall of the nose?

- A. anterior superior alveolar
- B. short sphenopalatine nerve
- C. nasopalatine
- D. greater palatine
- E. anterior ethmoidal nerve

Answer: C

8)which of the following is wrong about the left parietal pleura?

- A. the anterior border is close to the Medline
- B. the anterior border is about half of one inch from the Medline in the 4th- 6th rib
- C. the base is at 10th vertebra at posterior scapular line (Ans)

Answer: C

9) A patient comes to the ER after a car accident with damaged middle cranial fossa, which nerves of the following are damaged in the pterygoid canal?

- A. Greater and lesser petrosal
- B. Greater and deep petrosal
- C. Preganglionic sympathetic and parasympathetic
- D. Post ganglionic sympathetic and parasympathetic

Answer: B

10) which of the following about trachea is not correct?

- A. The left recurrent laryngeal and esophagus are posterior to it.
- B. The arch of the aorta and the isthmus of thyroid gland are anterior to it
- C. Goes up during inspiration

Answer: C

11) The main blood supply of the lung a visceral pleura is:

- A. Pulmonary artery
- B. Internal thoracic arteries
- C. Bronchial arteries
- D. Internal intercostal

Answer: C

12) All of the following are correct about the larynx except:

- A. The nerves and vessels enter the larynx at the lower border of the middle constrictor muscle of the pharynx
- B. It is supplied by superior and inferior laryngeal arteries
- C. Injury to the recurrent laryngeal nerve follows ligation of the superior thyroid artery
- D. Lymphatic drainage to deep cervical lymph nodes
- E. Venous blood drains to left brachiocephalic vein

Answer: C

Microbiology lab:

1)Staphylococcus aureus, which is WRONG?

- A. Catalase +ve
- B. Cannot convert fibrinogen to fibrin
- C. Ferments mannitol salt
- D. Forms clusters in growth
- E. A+B

Answer: B

2) Which of the following look green in chrome agar and form thick colonies in sabroud dextrose agar?

- A. C. albicans (Ans)
- B. C. Tropicalis
- C. C. Krusie
- D.C. galbarta

Answer: A

3. Which of the following is gram positive, catalase negative, positive bile- esculin?

- A. E.feacalis
- B. Strep viridans

Answer: A

4. The correct order in zeihl Nelsen staining is:

- A. Carbon fuchsin, heating, acid-alcohol, methylene blue
- B. Carbon fuchsin, acid-alcohol, methylene blue, heating
- B. Carbon fuchsin, acid-alcohol, methylene blue, heating
- C. Methylene blue, heating, acid-alcohol, carbon fuchsin
- D. None of the above

Answer: A

Microbiology:

1)Outbreak of pneumonia takes place in nursing home, and can be treated with zanamivir and adamantanes effectively, the most likely pathogen is...

- A. Influenza A
- B. Influenza B
- Legionella pneumophelia
- D. Metapneumo

Answer: A

2) the live attenuated vaccine of influenza virus is administered:

- A. Oraly
- B. Deep Intramuscular
- C. Intravenous
- D. Intranasal (Ans)
- E. Subcutaneous

Answer: D

3) Pathogen endemic in Ohio (North America) and found in bird seeds is?

- A. Histoplasma capsulatum
- B. Paracoccidioides Brasiliense's
- C. Blastomyces dermatitis's
- D. Coccidioides imcites
- E. Trichomonas

Answer: A

4) Lobar pneumonia with epiglottitis (patient leaning forward raising his head up), which of the following is component of vaccine used against the causative agent?

- A. Polyribitol phosphate plus toxoid
- B. Capsular polysaccharide
- C. Live-attenuated

Answer: A

5) which of the following about chlamydia pneumonia is most accurate?

- A. It transmitted by person to person by respiratory droplets
- B. It has glycogen-rich intracytoplasmic stained by iodine stain.
- C. It is composed of three strains, two that can cause systemic manifestation..

Answer: A

6) which of the following about influenza is incorrect

- A. The antigenic variations occur only in type A due to its wide host range.
- B. Worldwide epidemics is caused by type A influenza.
- C. Antigenic drift is caused from a mutation in ribonucleoprotein.
- D. Antigenic shift, a major change that result from reassortment of viral genome.
- E. Antigenic drift happens in both hemagglutinin and neuraminidase.

Answer: C

7) A homeless, malnourished chronic alcoholic presents with severe headache and dyspnea. Physical examination reveals a disheveled man with poor hygiene. His temperature is 41.0 C (105.8 F), blood pressure is 110/78 mm Hg, and pulse is 96/minute and regular. Auscultation of the chest reveals absence of breath sounds over the left middle lung fields. A chest x- ray confirms left lobar pneumonia. Sputum stain reveals partially acid-fast bacilli with branching rods. Which of the following agents is the most likely cause?

- A. Mycobacterium avium-intracellulare
- B. Mycobacterium kansasii
- C. Mycobacterium leprae d. Mycobacterium tuberculosis
- E. Nocardia asteroides

Answer: E

8) a bacterium which is alpha hemolytic, optochin sensitive, bile soluble, which of the following is considered of its virulence factors?

- A. Capsule and pneumolysin
- B. M protein
- C. Filamentous hemagglutinin and pertactin
- D. Adenylate cyclase

Answer: A

9) A patient with AGN, the primary mechanism for the pathogenesis of the disease is:

- A. Action of enterotoxin A
- B. M protein
- C. Teichoic acid
- D. Hemagglutinin

Answer: B

10) A 10-year-old girl with an incomplete vaccination history presents to her pediatrician with a fever of 38.6 C (101.5 F), sore throat, malaise, and difficulty breathing. Physical examination reveals cervical lymphadenopathy and a gray, leathery exudate in the rear of the oropharynx. The area bleeds profusely when disturbed with a tongue depressor. Which of the following correctly describes the causal agent?

- A. Gram-negative rod; toxin that inhibits protein synthesis
- B. Gram-negative rod; toxin that increases cAMP
- C. Gram-positive aerobic rod; toxin that inhibits protein synthesis
- D. Gram-positive anaerobic rod; toxin that inhibits protein synthesis
- E. Gram-positive aerobic rod; toxin that increases cAMP

Answer: C

11) what is the role of the trehalose dimycolate (cord factor) in mycobacterial cell wall?

- A. Responsible for inhibiting phagolysosome formation
- B. Serpentine growth

Answer: B

12) how diphtheria becomes toxigenic:

Answer: by a Beta bacteriophage (lysogenic conversion)

13. Which of the following is optochin sensitive?

- A. Strep. Pneumonia
- B. Strep. Pyogenes
- C. Strep. Viridans
- D. Staph. Aureus
- E. Strep. Agalactiae

Answer: A

Physiology:

1) which of the following is least likely to change the diffusion lung capacity?

- A. Exercise
- B. Emphysema
- C. Asthma
- D. Fibrosis
- E. Anemia

Answer: C

2. which of the following is diffusion limited gas exchange?

- A. N₂O
- B. CO₂ in normal conditions
- C. O₂ in normal conditions
- D. O₂ in patients with fibrosis

Answer: D

3. A patient comes to the clinic with a left stab wound in his chest after a fight, complaining of decreased inspiratory force due to pain, respiratory rate is 27 breaths/min, blood pressure 135/80 mmHg and arterial PO₂ is 81 mmHg, on examination, decreased breath sounds on the left side in the distal airways, which of the following is the cause of his respiratory insufficiency during inspiration?

- A. Paralysis of the diaphragm
- B. Pain after inspiration
- C. Equilibrium between the pleural pressure and atmospheric pressure (Ans)
- D. The pleural pressure is more negative

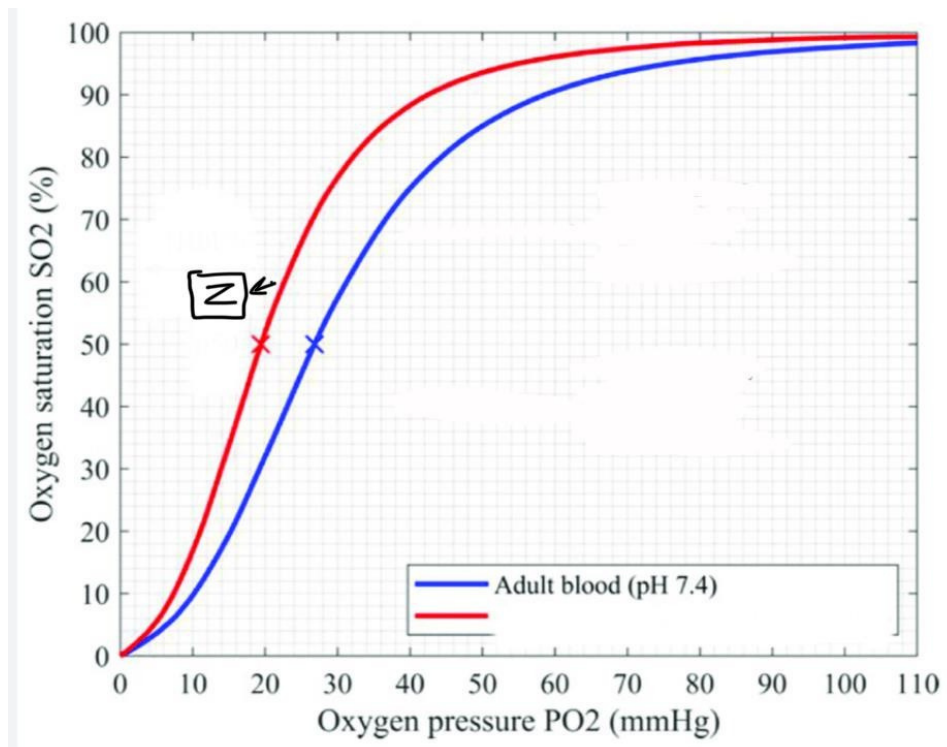
Answer: C

4. An infant is born at 32 months age and had acute respiratory distress syndrome and went to the ICU, which of the following is the cause of this condition:

- A. Loss of surfactant due to undeveloped type 1 pneumocyte
- B. Less work of the lungs
- C. Increased surface tension
- D. Normal pO_2

Answer: C

5. The letter Z in this graph represents:



- A. Hemoglobin F (ans)
- B. Hemoglobin A
- C. Hemoglobin S

Answer: A

6. which of the following regarding zone 1 is correct:

- A. Highest blood flow, highest alveolar ventilation, lowest V/Q ratio, lowest PO_2 and highest PCO_2
- B. Lowest blood flow, lowest alveolar ventilation, highest V/Q ratio
- C. Highest blood flow, lowest alveolar ventilation, highest V/Q ratio.

Answer: B

7. Which of the following regarding CO poisoning is correct:

- A. Patient present with cyanosis
- B. Oxygen hemoglobin saturation can be measured by a standard pulse oximeter.
- C. Headache, flue like symptoms and other nonspecific symptoms.
- D. PO₂ is low and Pco₂ is high

Answer: C

8. Which of the following about CO₂ is correct?

- A. When it binds to hemoglobin it is called carboxyhemoglobin.
- B. Most of the CO₂ present in the dissolved form.
- C. CO₂ binding to hemoglobin increases the affinity for oxygen.
- D. Oxygenation of hemoglobin promotes dissociation of H⁺ and shifts equilibrium toward CO₂ formation.

Answer: D

9. A patient present with a physiological dead space of 120 ml, a tidal volume of 480ml, which of the following is correct?

- A. 25% of tidal volume exchange gases with functional alveoli.
- B. 75% of tidal volume exchange gases with functional alveoli.

Answer: B

10. Regarding the picture below, what is the maximal volume that can be expired after forceful inspiration?

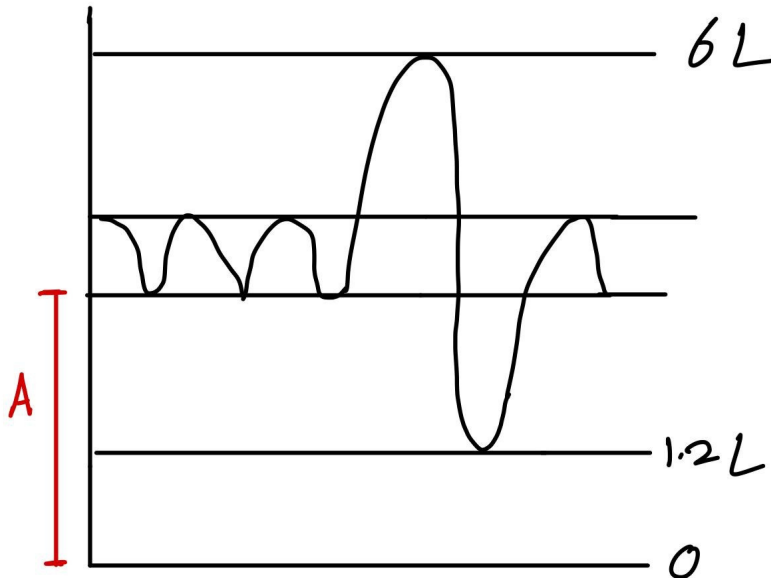
- A. 3.8 liter
- B. 6.0 liter
- C. 4.8 liter

Answer: C

11. In the picture below, what is correct about the area “A”?

- A. It is reduced with fibrosis
- B. It is reduced by emphysema
- C. Can be calculated by standard spirometer

Answer: A



12. Which of the following about lung ventilation is correct?

- A. At functional residual capacity the collapsing forces affecting the lung are higher than the expanding forces.
- B. At functional residual capacity, the expanding forces are higher than the collapsing forces.
- C. The lung alone has higher compliance than the lung and chest combined.

Answer: C

13. Which of the following is correct about gas diffusion:

- A. Blood gives up 25% of O₂ in the tissue in normal people
- B. In normal people O₂ saturation of hemoglobin is 100% and PaO₂ is 100 mmHG

Answer: A