Yakeen NEET 2.0 2026

Zoology By Samapti Sinha Ma'am

Breathing and Exchange of Gases

DPP: 3

Q1 Inspiration occurs when intra pulmonary pressure is
(A) Higher than atmospheric pressure
(B) Lower than atmospheric pressure
(C) Equal to atmospheric pressure
(D) Zero compared to atmospheric pressure

Q2 During inspiration, the volume of thoracic cavity increases because of:
(A) contraction of diaphragm and external intercostal muscles.
(B) relaxation of diaphragm and external intercostal muscles.
(C) contraction of diaphragm and relaxation of external inter-costal muscles.
(D) relaxation of diaphragm and contraction of external inter-costal muscles.

Q3 What happens to the volume of pulmonary cavity when there is an increase in the volume of thoracic chamber?
(A) It decreases
(B) It increases
(C) It remains same
(D) First decreases and then increases

Q4 Inspiration occurs when there is a negative pressure in the lungs with respect to atmospheric pressure.This negative pressure is achieved when
(A) Intrapulmonary pressure is less than the atmospheric pressure
(B) Intrapulmonary pressure is greater than the atmospheric pressure
(C) Intrapulmonary pressure is equal to the atmospheric pressure
(D) Intrapleural pressure becomes more than the intra alveolar pressure

Q5 An _____A_____ in the pulmonary volume _____B_____ the intra pulmonary pressure to less than the atmospheric pressure which forces the air from _____C_____ to move into the lungs, i.e. _____D_____.
Choose the correct options for the blanks A, B, C and D to complete the above statement.
(A) A-increase, B - decrease, C-outside, D - expiration
(B) A-decrease, B - increase, C-outside, D - expiration
(C) A - decrease, B - increase, C - inside, D - inspiration
(D) A-increase, B-decrease, C-outside, D-inspiration

Q6 Contraction of diaphragm
(A) Increases the volume of the thoracic chamber in the antero-posterior axis
(B) Increases the volume of the thoracic chamber in the dorso-ventral axis
(C) Decreases the volume of the thoracic chamber in the antero-posterior axis
(D) Decreases the volume of the thoracic chamber in the dorso-ventral axis

Q7 Which of the following events takes place during inspiration?
(A) Diaphragm and external intercostal muscles contracts
(B) Diaphragm and internal intercostal muscles relax
(C) Intra pleural pressure is less than atmospheric pressure
(D) Both (A) and (C)

Q8 Fill in the blank.

During inspiration, there is..... pressure in the lungs w.r.t. atmospheric pressure
(A) Positive
(B) Negative
(C) Neither positive nor negative
(D) All of the above

Q9 Identity the correct sequence of following events.
1. Air is inspired.
2. Increase in thoracic cavity.
3. Increase in pulmonary cavity.
4. Contraction of intercostal and phrenic muscles.

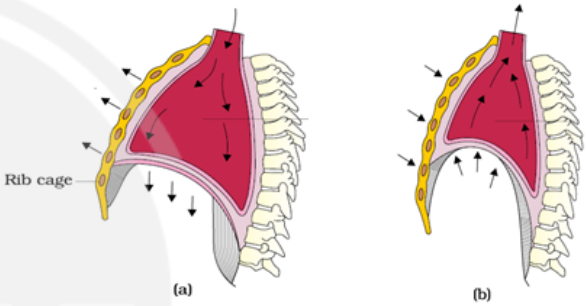
(A) $1 \rightarrow 2 \rightarrow 3 \rightarrow 4$
(B) $4 \rightarrow 1 \rightarrow 2 \rightarrow 3$
(C) $4 \rightarrow 3 \rightarrow 2 \rightarrow 1$
(D) $4 \rightarrow 2 \rightarrow 3 \rightarrow 1$

Q10 Read the following statements and find out the **correct** statements regarding inspiration.
I. Inspiration is initiated by the contraction of the diaphragm which increases the volume of the thoracic chamber in the antero-posterior axis.
II. The contraction of external intercostal muscles lifts up the ribs and the sternum causing a decrease in the volume of the thoracic chamber in the dorso-ventral axis..
III. An increase in the thoracic volume causes a similar increase in pulmonary volume.
IV. An increase in pulmonary volume increases the intra-pulmonary pressure.
V. Intra-pulmonary pressure is less than the atmospheric pressure which forces the air from outside to move into the lungs.
(A) I, II and III
(B) I, III and V
(C) I and IV only
(D) I, II, III, IV and V

Q11 **In each of the following questions, a statement of Assertion (A) is given by corresponding statement of Reason (R). Of the statements, mark the correct answer as:**
Assertion (A): In normal breathing, inspiration is an active process.
Reason (R): Inspiration is facilitated by contraction of diaphragm and external intercostal muscles.
(A) If both A and R are true and R is the correct explanation of A.
(B) If both A and R are true, but R is not the correct explanation of A.
(C) If A is true, but R is false
(D) If A is false, but R is true

Q12 Diaphragm contract during inspiration becomes;
(A) Flat (B) Dome shaped
(C) Concave (D) Rotate

Q13 Recognise the figure and find out the **correct** match.



(A) a–inspiration, b–expiration
(B) a–expiration, b–inspiration
(C) a–inspiration, b–inspiration
(D) a–expiration, b–expiration

Q14 Expiration occurs due to:
(A) relaxation of diaphragm and external intercostal muscle.
(B) contraction of internal intercostal muscles and diaphragm.
(C) relaxation of abdominal and internal intercostal muscles.
(D) contraction of diaphragm and relaxation of abdominal muscles.

Q15 When you exhale, the diaphragm;
(A) relaxes and arches.
(B) relaxes and flattens.
(C) contracts and arches.
(D) contracts and flattens.

Q16

Arrange the given steps of expiration in the sequence of event occurring first
I. Relaxation of the diaphragm and sternum
II. Reduction of the pulmonary volume
III. Expulsion of air from the lungs
IV. Increase intrapulmonary pressure
Choose the **correct** option.
(A) $\mathrm{I} \rightarrow \mathrm{II} \rightarrow \mathrm{III} \rightarrow \mathrm{IV}$
(B) $\mathrm{I} \rightarrow \mathrm{II} \rightarrow \mathrm{IV} \rightarrow \mathrm{III}$
(C) $\mathrm{IV} \rightarrow \mathrm{III} \rightarrow \mathrm{II} \rightarrow \mathrm{I}$
(D) $\mathrm{IV} \rightarrow \mathrm{II} \rightarrow \mathrm{III} \rightarrow \mathrm{I}$

Q17 During expiration, the diaphragm becomes:
(A) Normal (B) Flattened.
(C) Dome-shaped. (D) Oblique.

Q18 **Directions:** In this question, two statements are given as **statement-I** and **statement-II**. Mark the correct choice as:
Statement-I: Breathing is commonly known as respiration.
Statement-II: Spirometer helps in clinical assessment of pulmonary functions.
(A) Both Statement-I and Statement-II are correct.
(B) Both Statement-I and Statement-II are incorrect.
(C) Statement-I is correct and Statement-II is incorrect.
(D) Statement-I is incorrect and Statement-II is correct.

Q19 Value of tidal volume in a normal healthy man is:
(A) $6000 - 8000 \mathrm{ml/min}$
(B) $1000 - 1100 \mathrm{ml/min}$
(C) $2500 - 3000 \mathrm{ml/min}$
(D) $8000 - 12000 \mathrm{ml/min}$

Q20 If a person exhales out forcefully by applying all his efforts. What will the pulmonary volume inhaled by him immediately under normal condition without applying any extra effort?
(A) TV+IRV
(B) TV only
(C) $\mathrm{TV} + \mathrm{ERV}$
(D) $\mathrm{TV} + \mathrm{IRV} + \mathrm{ERV}$

Q21 Tidal volume is:
(A) Volume of air inspired or expired in normal breath
(B) Additional volume of air, a person can inspire by a forcible inspiration
(C) Additional volume of air, a person can expire by a forcible expiration
(D) Remaining volume of air in the lungs even after a forcible expiration

Q22 Approximate, volume of air a healthy man can expire or inspire per minute is
(A) 5000 to $6000 \mathrm{~mL}$
(B) 6000 to $7000 \mathrm{~mL}$
(C) 6000 to $8000 \mathrm{~mL}$
(D) 7000 to $900 \mathrm{~mL}$

Q23 Select the statement which is incorrect.
(A) Flatworms exchange respiratory gases by simple diffusion over their body surface.
(B) Expiration take place when the intra-pulmonary pressure is lower than atmospheric pressure.
(C) Diffusion membrane is made up of 3 major layers of thickness less than $1mm$.
(D) Tidal volume is approx $500mL$ in a healthy man.

Q24 The volume of air a healthy man can expire or inspire per minute is;
(A) 5000 to $6000 \mathrm{~mL}$.
(B) 3000 to $5000 \mathrm{~mL}$.
(C) 6000 to $8000 \mathrm{~mL}$.
(D) 7000 to $9000 \mathrm{~mL}$.

Answer Key

Q1	(B)
Q2	(A)
Q3	(B)
Q4	(A)
Q5	(D)
Q6	(A)
Q7	(D)
Q8	(B)
Q9	(D)
Q10	(B)
Q11	(A)
Q12	(A)
Q13	(A)
Q14	(A)
Q15	(A)
Q16	(B)
Q17	(C)
Q18	(A)
Q19	(A)
Q20	(C)
Q21	(A)
Q22	(C)
Q23	(B)
Q24	(C)