AIPMT 2006

1. Which one of the following statements is **incorrect** ?
(1) The residual air in lungs slightly decreases the efficiency of respiration in mammals
(2) The presence of non–respiratory air sacs, increases the efficiency of respiration in birds
(3) In insects, circulating body fluids serve to distribute oxygen to tissues
(4) The principle of counter current flow facilitates efficient respiration in gills of fishes

2. The majority of carbon dioxide produced by our body cells is transported to the lungs –
(1) Dissolved in the blood
(2) As bicarbonates
(3) As carbonates
(4) Attached to haemoglobin

3. Bowman's glands are found in –
(1) Olfactory epithelium
(2) External auditory canal
(3) Cortical nephrons only
(4) Juxtamedullary nephrons

AIPMT 2007

4. Bowman's glands are located in the :-
(1) Olfactory epithelium of our nose
(2) Proximal end of uriniferous tubules
(3) Anterior pituitary
(4) Female reproductive system of cockroach

AIPMT 2008

5. What is vital capacity of our lungs ?
(1) inspiratory reserve volume plus expiratory reserve volume
(2) total lung capacity minus residual volume
(3) inspiratory reserve volume plus tidal volume
(4) total lung capacity minus expiratory reserve volume

AIPMT-Pre 2010

6. Listed below are four respiratory capacities (a-d) and four jumbled respiratory volumes of a normal human adult :

	Respiratory capacities	Respiratory volumes
(a)	Residual volume	2500 mL
(b)	Vital capacity	3500 mL
(c)	Inspiratory reserve volume	1200 mL
(d)	Inspiratory capacity	4500 mL

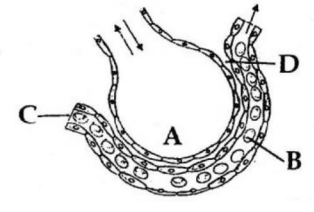
Which one of the following is the **correct** matching *of* two capacities and volumes ?
(1) (a) 4500 mL, (b) 3500 mL
(2) (b) 2500 mL, (c) 4500 mL
(3) (c) 1200 mL, (d) 2500 mL
(4) (d) 3500 mL, (a) 1200 mL

7. What is true about RBCs in humans ?
(1) They do not carry CO_2 at all
(2) They carry about 20-25 per cent of CO_2
(3) They transport 99.5 per cent of O_2
(4) They transport about 80 percent oxygen only and the rest 20 per cent of it is transported in dissolved state in blood plasma.

AIPMT-Pre 2011

8. Two friends are eating together on a dining table. One of them suddenly starts coughing while swallowing some food. This coughing would have been due to improper movement of-
(1) Epiglottis (2) Diaphragm
(3) Neck (4) Tongue

9. The figure given below shows a small part of human lung where exchange of gases takes place. In which one of the options given below, the one part, A, B, C or D is correctly identified along with its function



Options :

(1) C : arterial capillary-passes oxygen to tissues

(2) A : alveolar cavity-main site of exchange of respiratory gases

(3) D : Capillary wall-exchange of O_2 and CO_2 takes place here

(4) B : red blood cell-transport of CO_2 mainly

10. A large proportion of oxygen is left unused in the human blood even after its uptake by the body tissues. This O_2 :

(1) Acts as a reserve during muscular exercise

(2) Raises the pCO_2 of blood to 75 mm of Hg.

(3) Is enough to keep oxyhaemoglobin saturation at 96%

(4) Helps in releasing more O_2 to the epithelial tissues

AIPMT-Mains 2011

11. Bulk of carbon dioxide (CO_2) released from body tissues into the blood is present as :

(1) Carbamino-haemoglobin in RBCs

(2) Bicarbonate in blood plasma and RBCs

(3) Free CO_2 in blood plasma

(4) 70% carbamino-haemoglobin and 30% as bicarbonate

AIPMT-Pre 2012

12. Which one of the following is the correct statement for respiration in humans ?

(1) Workers in grinding and stone-breaking industries may suffer, from lung fibrosis

(2) Abut 90% of carbon dioxide (CO_2) is carried by haemoglobin as carbamino haemoglobin

(3) Cigarette smoking may lead to inflammation of bronchi

(4) Neural signals from pneumotaxic centre in pons region of brain can increase the duration of inspiration

13. People who have migrated from the planes to an area adjoining Rohtang pass about six months back:

(1) suffer from altitude sickness with symptoms like nausea, fatigue, etc.

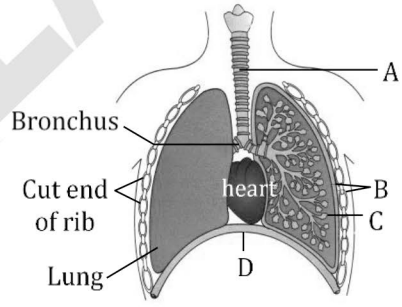
(2) have the usual RBC count but their haemoglobin has very high binding affinity to O_2

(3) have more RBCs and their haemoglobin has a lower binding affinity to O_2

(4) are not physically fit to play games like football.

NEET-UG 2013

14. The figure shows a diagrammatic view of human respiratory system with labels A, B, C and D. Select the option which gives correct identification and main function and/or characteristic :-



(1) **D** – Lower end of lungs – diaphragm pulls it down during inspiration

(2) **A** – trachea - long tube supported by complete cartilaginous rings for conducting inspired air

(3) **B** – pleural membrane - surround ribs on both sides to provide cushion against rubbing

(4) **C** – Alveoli - thin walled vascular bag like structures for exchange of gases

AIPMT 2014

15. Approximately seventy percent of carbon-dioxide absorbed by the blood will be transported to the lungs:

(1) as bicarbonate ions

(2) in the form of dissolved gas molecules

(3) by binding to R.B.C.

(4) as carbamino - haemoglobin

AIPMT 2015

16. When you hold your breath, which of the following gas changes in blood would first lead to the urge to breathe?
(1) rising CO_2 concentration
(2) falling CO_2 concentration
(3) rising CO_2 and falling O_2 concentration
(4) falling O_2 concentration

NEET-I 2016

17. Asthma may be attributed to :
(1) bacterial infection of the lungs
(2) allergic reaction of the mast cells in the lungs
(3) inflammation of the trachea
(4) accumulation of fluid in the lungs

NEET-II 2016

18. The partial pressure of oxygen in the alveoli of the lungs is :-
(1) Less than that in the blood
(2) Less than that of carbon dioxide
(3) Equal to that in the blood
(4) More than that in the blood

19. Lungs do not collapse between breaths and some air always remains in the lungs which can never be expelled because :-
(1) There is a positive intrapleural pressure
(2) Pressure in the lungs is higher than the atmospheric pressure.
(3) There is a negative pressure in the lungs.
(4) There is a negative intrapleural pressure pulling at the lung walls

NEET (UG) 2017

20. Lungs are made up of air-filled sacs, the alveoli. They do not collapse even after forceful expiration, because of:
(1) Inspiratory Reserve Volume
(2) Tidal Volume
(3) Expiratory Reserve Volume
(4) Residual Volume

NEET(UG) 2018

21. Which of the following options correctly represents the lung conditions in asthma and emphysema, respectively ?
(1) Inflammation of bronchioles; Decreased respiratory surface
(2) Increased number of bronchioles; Increased respiratory surface
(3) Increased respiratory surface; Inflammation of bronchioles
(4) Decreased respiratory surface; Inflammation of bronchioles

22. Match the items given Column I with those in Column II and select the ***correct*** option given below :

Column-I	**Column-II**
a. Tidal volume	i. 2500-3000 mL
b. Inspiratory Reserve volume	ii. 1100-1200 mL
c. Expiratory Reserve volume	iii. 500-550 mL
d. Residual volume	iv. 1000-1100 mL

	a	**b**	**c**	**d**
(1)	iii	ii	i	iv
(2)	iii	i	iv	ii
(3)	iii	iv	ii	iii
(4)	iv	iii	ii	i

23. Which of the following is an occupational respiratory disorder ?
(1) Anthracis
(2) Silicosis
(3) Botulism
(4) Emphysema

NEET (UG) 2019

24. Tidal Volume and Expiratory Reserve Volume of an athlete is 500 mL and 1000 mL respectively. What will be his Expiratory Capacity if the Residual Volume is 1200 mL?
(1) 1500 mL
(2) 1700 mL
(3) 2200 mL
(4) 2700 mL

NEET (UG) 2019 (ODISHA)

25. Select the correct statement.

(1) Expiration occurs due to external intercostal muscles

(2) Intrapulmonary pressure is lower than the atmospheric pressure during inspiration.

(3) Inspiration occurs when atmospheric pressure is less than intrapulmonary pressure.

(4) Expiration is initiated due to contraction of diaphragm.

26. The maximum volume of air a person can breathe in after a forced expiration is known as:

(1) Expiratory Capacity

(2) Vital Capacity

(3) Inspiratory Capacity

(4) Total lung Capacity

NEET (UG) 2020

27. Identify the wrong statement with reference to transport of oxygen.

(1) Low pCO_2 in alveoli favours the formation of oxyhaemoglobin.

(2) Binding of oxygen with haemoglobin is mainly related to partial pressure of O_2.

(3) Partial pressure of CO_2 can interfere with O_2 binding with haemoglobin.

(4) Higher H^+ conc. in alveoli favours the formation of oxyhaemoglobin.

28. Select the correct events that occur during inspiration.

(a) Contraction of diaphragm

(b) Contraction of external inter-costal muscles

(c) Pulmonary volume decreases

(d) Intra pulmonary pressure increases

(1) only (d)

(2) (a) and (b)

(3) (c) and (d)

(4) (a), (b) and (d)

NEET (UG) 2020 (COVID-19)

29. The Total Lung Capacity (TLC) is the total volume of air accommodated in the lungs at the end of a forced inspiration. This includes :

(1) RV; IC (Inspiratory Capacity); EC (Expiratory Capacity); and ERV

(2) RV; ERV; IC and EC

(3) RV; ERV; VC (Vital Capacity) and FRC (Functional Residual Capacity)

(4) RV (Residual Volume); ERV (Expiratory Reserve Volume); TV (Tidal Volume); and IRV (Inspiratory Reserve Volume)

30. Match the following columns and select the correct option :

	Column-I		Column-II
(a)	Pneumotaxic Centre	(i)	Alveoli
(b)	O_2 Dissociation	(ii)	Pons region of brain
(c)	Carbonic Anhydrase	(iii)	Haemoglobin
(d)	Primary site of exchange of gases	(iv)	R.B.C.

(1) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv)

(2) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)

(3) (a)-(iii), (b)-(ii), (c)-(iv), (d)-(i)

(4) (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)

NEET (UG) 2021

31. The partial pressures (in mm Hg) of oxygen (O_2) and carbon dioxide (CO_2) at alveoli (the site of diffusion) are :

(1) $pO_2 = 104$ and $pCO_2 = 40$

(2) $pO_2 = 40$ and $pCO_2 = 45$

(3) $pO_2 = 95$ and $pCO_2 = 40$

(4) $pO_2 = 159$ and $pCO_2 = 0.3$

32. Select the favourable conditions required for the formation of oxyhaemoglobin at the alveoli.

(1) High pO_2, low pCO_2, less H^+, lower temperature

(2) Low pO_2, high pCO_2, more H^+, higher temperature

(3) High pO_2, high pCO_2, less H^+, higher temperature

(4) Low pO_2, low pCO_2, more H^+, higher temperature

NEET (UG) 2022

33. Which of the following is **not** the function of conducting part of respiratory system ?

(1) Inhaled air is humidified

(2) Temperature of inhaled air is brought to body temperature

(3) Provides surface for diffusion of O_2 and CO_2

(4) It clears inhaled air from foreign particles

34. Under normal physiological conditions in human being every 100 ml of oxygenated blood can deliver _____ml of O_2 to the tissues.

(1) 5ml (2) 4 ml

(3) 10 ml (4) 2 ml

35. Which of the following statements are correct with respect to vital capacity?

(a) It includes ERV, TV and IRV

(b) Total volume of air a person can inspire after a normal expiration

(c) The maximum volume of air a person can breathe in after forced expiration

(d) It includes ERV, RV and IRV.

(e) The maximum volume of air a person can breath out after a forced inspiration.

Choose the **most appropriate answer** from the options given below:

(1) (b), (d) and (e) (2) (a), (c) and (d)

(3) (a), (c) and (e) (4) (a) and (e)

EXERCISE-II (Previous Year Questions) ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	3	2	1	1	2	4	2	1	2	1	2	1	3	4	1
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	1	2	4	4	4	1	2	2	1	2	2	4	2	4	2
Question	31	32	33	34	35										
Answer	1	1	3	1	3										