1. Which of the following factors are favourable for the formation of oxyhaemoglobin in alveoli? **(2024)**

(a) High pO_2 and Lesser H+ concentration

(b) Low pCO_2 and High H+ concentration

(c) Low pCO_2 and High temperature

(d) High pO_2 and High pCO_2

2. Match List I with List II :

Choose the correct answer from the options given below: **(2024)**

List I		List II	
A.	Expiratory capacity	I.	Expiratory reserve volume + Tidal volume + Inspiratory reserve volume
B.	Functional residual capacity	II.	Tidal volume +Expiratory reserve volume
C.	Vital capacity	III.	Tidal volume + Inspiratory reserve volume
D.	Inspiratory Capacity	IV.	Expiratory Reserve Volume + Residual Volume

(a) A-III, B-II, C-IV, D-I

(b) A-II, B-I, C-IV, D-III

(c) A-I, B-III, C-II, D-IV

(d) A-II, B-IV, C-I, D-III

3. Select the sequence of steps in Respiration. **(2023)**

(A) Diffusion of gases O_2 and CO_2 across alveolar membrane.

(B) Diffusion of O_2 and CO_2 between blood and tissues.

(C) Transport of gases by the blood

(D) Pulmonary ventilation by which atmospheric air is drawn in and CO_2 rich alveolar air is released out.

(E) Utilisation of O_2 by the cells for catabolic reactions are resultant release of CO_2

Choose the correct answer from the options given below:

(a) (D), (A), (C), (B), (E)

(b) (C), (B), (A), (E), (D)

(c) (B), (C), (E), (D), (A)

(d) (A), (C), (B), (E), (D)

4. Vital capacity of lung is ____. **(2023)**

(a) IRV+ ERV+ TV+ RV

(b) IRV+ ERV+ TV + RV

(c) IRV+ ERV+ TV

(d) IRV + ERV

5. Identify the region of human brain which has pneumotaxic centre that alters respiratory rate by reducing the duration of inspiration. **(2022)**

(a) Cerebrum (b) Medulla

(c) Pons (d) Thalamus

6. Which of the following statements are correct with respect to vital capacity? **(2022)**

(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:
(a) (A) and (C)
(b) (B), (D) and (E)
(c) (A), (C), and (D)
(d) (A) and (C) and (E)

7. Under normal physiological conditions in human being every 100 ml of oxygenated blood can deliver _____ ML. of 0_2 to the tissues. **(2022)**
(a) 2 ml (b) 5 ml
(c) 4 ml (d) 10 ml

8. Which of the following is not the function of conducting part of respiratory system? **(2022)**
(a) It clears inhaled air form foreign particles
(b) Inhaled air is humidified
(c) Temperature of inhaled air is brought to body temperature
(d) Provides surface for diffusion of 0_2 and $C0_2$

9. The partial pressures (in mm Hg) of oxygen (0_2) and carbon dioxide ($C0_2$) at alveoli (the site of diffusion) are **(2021)**
(a) $pO_2 = 40\ and\ pCO_2 = 45$
(b) pO_2 = 95 and pCO_2 = 40
(c) pO_2 = 159 and pCO_2 = 0.3
(d) pO_2 = 104 and pCO_2 = 40

10. Select the favourable conditions required for the formation of oxyhaemoglobin at the alveoli. **(2021)**
(a) Low pO_2, high pCO_2, more H+, higher temperature
(b) High pO_2, high pCO_2, less H+, higher temperature
(c) Low pO_2, low pCO_2, more H+, higher temperature
(d) High pO_2, low pCO_2, less H+, lower temperature

11. Identify the wrong statement with reference to transport of oxygen **(2020)**
(a) Partial pressure of CO_2 can interfere with O_2 binding with haemoglobin
(b) Higher H+ concentration in alveoli favours the formation of oxyhaemoglobin
(c) Low pO_2 in alveoli favours the formation of oxyhaemoglobin
(d) Binding of oxygen with haemoglobin is mainly related to partial pressure of O_2

12. Select the correct events that occur during inspiration **(2020)**
1. Contraction of diaphragm
2. Contraction of external inter-costal muscles
3. Pulmonary volume decreases
4. Intra pulmonary pressure increases
(a) 3 and 4
(b) 1, 2 and 4
(c) Only 4
(d) 1 and 2

13. Match the following columns and select the correct option **(2020 Covid Re-NEET)**

Column - I		Column - II	
1.	Pneumotaxic Centre	(i)	Alveoli
2.	0_2 dissociation curve	(ii)	Pons region of brain
3.	Carbonic anhydrase	(iii)	Haemoglobin
4.	Primary site of exchange of gases	(iv)	RBC

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

14. Total Lung Capacity (TLC) is the total volume of air accomodated in the lungs at the end of a forced inspiration. This includes **(2020 Covid Re-NEET)**
(a) RV, ERV, IC and EC
(b) RV, ERV, VC and FRC
(c) RV, ERV, TV, and IRV
(d) RV, IC, EC, and ERV

15. Due to increasing air-borne allergens and pollutants, many people in urban areas are suffering from respiratory disorder causing wheezing due to **(2019)**

(a) Benign growth on mucous lining of nasal cavity
(b) Inflammation of bronchi and bronchioles
(c) Proliferation of fibrous tissues and damage of the alveolar walls
(d) Reduction in the secretion of surfactants by pneumocytes

16. 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? **(2019)**

(a) 1500 mL (b) 1700 mL
(c) 2200 mL (d) 2700 mL

17. Which of the following option is correctly represent the lung conditions in asthma and emphysema respectively? **(2018)**

(a) Inflammation of bronchioles; Decreased respiratory surface
(b) Increased number of bronchioles; Increased respiratory surface
(c) Increased respiratory surface; Inflammation of bronchioles
(d) Decreased respiratory surface; Inflammation of bronchioles

18. Match the items given Column I with those in Column II and select the correct option given below **(2018)**

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) A-(iii) B-(ii) C-(i) D-(iv)
(b) A-(iii) B-(i) C-(iv) D-(ii)
(c) A-(i) B-(iv) C-(ii) D-(iii)
(d) A-(iv) B-(iii) C-(ii) D-(i)

19. Which of the following is an occupational respiratory disorder? **(2018)**

(a) Anthracis (b) Silicosis
(c) Botulism (d) Emphysema

20. Lungs are made up of air-filled sacs, the alveoli. They do not collapse even after forceful expiration because of **(2017)**

(a) Residual Volume
(b) Inspiratory Reserve Volume
(c) Tidal Volume
(d) Expiratory Reserve Volume

21. Which of the following cannot be measured by spirometry? **(2017)**

(a) Vital capacity
(b) Tidal volume
(c) Inspiratory reserve volume
(d) Residual volume

22. Lungs do not collapse between breaths and some air always remains in the lungs which can never be expelled because **(2016-II)**

(a) There is a positive intrapleural pressure
(b) Pressure in the lungs is higher than the atmospheric pressure
(c) There is a negative pressure in the lungs
(d) There is a negative intrapleural pressure pulling at the lung walls

23. Partial pressure of oxygen in the alveoli of the lungs is **(2016-II)**

(a) Less than that in the blood
(b) Less than that of carbon dioxide
(c) Equal to that in the blood
(d) More than that in the blood

24. Reduction in pH of blood will **(2016-I)**

(a) Reduce the rate of heart beat
(b) Reduce the blood supply to the brain
(c) Decrease the affinity of hemoglobin with oxygen
(d) Release bicarbonate ions by the liver

25. When you hold your breath which of the following gas changes in blood would first lead to the urge to breathe? **(2015 Re)**

(a) Rising CO_2 concentration
(b) Rising CO_2 and falling O_2 concentration
(c) Falling O_2 concentration
(d) Falling CO_2 concentration

26. Approximately seventy percent of carbon-dioxide absorbed by the blood will be transported to the lungs **(2014)**

(a) As carbamino-haemoglobin
(b) As bicarbonate ions
(c) In the form of dissolved gas molecules
(d) By binding to R.B.C