

**NEET BIOLOGY**

*Topic: Breathing and Exchange of Gases.*

1. A difficulty in breathing causing wheezing due to inflammation of bronchi & bronchioles are symptoms of
  - (a) Emphysema
  - (b) Asthma
  - (c) Cystic fibrosis
  - (d) Fibrosis
2. A chronic disorder in which alveolar walls are damaged and respiratory surface is decreased is :-
  - (a) Emphysema
  - (b) Asthma
  - (c) Pneumonia
  - (d) Asbestosis
3. Receptor associated with aortic arch and carotid artery recognise change in :-
  - (a)  $\text{CO}_2$  &  $\text{H}^+$
  - (b)  $\text{H}^+$  &  $\text{O}_2$
  - (c)  $\text{O}_2$  &  $\text{CO}_2$
  - (d)  $\text{O}_2$  & BPG
4. How much amount of  $\text{O}_2$  is carried by haemoglobin as carbamino - haemoglobin?
  - (a) 70%
  - (b) 7%
  - (c) 20 to 25%
  - (d) 3%
5. How much amount of  $\text{CO}_2$  is delivered by every 100ml of oxygenated blood?
  - (a) 10 ml
  - (b) 5 ml
  - (c) 15 ml
  - (d) 20 ml
6. About 97% of  $\text{O}_2$  is transported by :-
  - (a) RBCs
  - (b) WBCs
  - (c) Platelets
  - (d) Neutrophils

7. The maximum volume of air a person can breathe in after a forced expiration is equal to the sum of :-
- (a)  $RV + ERV + TV + IRV$  (b) Vital capacity + residual volume  
(c)  $ERV + TV + IRV$  (d)  $ERV + RV$
8. Volume of air remain in the lungs even after a forcible expiration is
- (a) TV (b) RV  
(c) ERV (d) IRV
9. Additional volume of air, a person can expire by a forcible expiration is :-
- (a) ERV (b) IRV  
(c) TV (d) VC
10. In case of insects, exchange of gases occurs through:-
- (a) Malpighian tubules (b) Tracheal system  
(c) Coxal gland (d) Book lungs
11. In a healthy person breathing rate is :-
- (a) 20 – 25 times/minute (b) 20 – 30 times/min.  
(c) 12 – 16 times/minute (d) 70 – 72 times/min
12. How much air a healthy person can inspire or expire per minute ?
- (a) 500 ml (b) 1100 ml  
(c) 3000 ml (d) 6000 – 8000 ml
13. Partial pressure of  $O_2$  in oxygenated blood is :-
- (a) 104 mmHg (b) 159 mmHg  
(c) 95 mmHg (d) 40 mmHg

14. The solubility of  $\text{CO}_2$  is how much times higher than  $\text{O}_2$ ?
- (a) 15 – 20 (b) 20 – 25  
(c) 30 – 35 (d) 2 – 5
15. Relaxation of the diaphragm and the inter-costal muscles help in :-
- (a) Reduction in thoracic volume  
(b) Increase in intra-pulmonary pressure  
(c) Decrease in intra-pulmonary pressure  
(d) Both (a) and (b)
16. The volume of air involved in breathing movements can be estimated by using :-
- (a) Spirometer (b) Aspirator  
(c) Artificial lung machine (d) Sphygmomanometer
17. The contraction of diaphragm increase volume of thoracic chamber in :-
- (a) Dorso – ventral axis (b) Antero-posterior axis  
(c) Diagonal axis (d) Lateral sides
18. Respiratory centre of brain is stimulated by:
- (a)  $\text{CO}_2$  content of venous blood (b)  $\text{CO}_2$  content of arterial blood  
(c)  $\text{O}_2$  content of venous blood (d)  $\text{O}_2$  content of arterial blood
19. Carbon dioxide entering the erythrocytes reacts with water to form carbonic acid. The enzyme is:
- (a) Carbonic anhydrase (b) Carboxy peptidase  
(c) Hydrolase (d) Oxido-reductase
20. Which vertebral organ receives only oxygenated blood?
- (a) Gill (b) Lung  
(c) Spleen (d) Liver

21. Arytenoid cartilage occurs in:

- (a) Nose
- (b) Larynx
- (c) Hyoid
- (d) Sternum

22. Bicarbonate ion is produced inside:

- (a) Lymphocytes
- (b) Erythrocytes
- (c) Neutrophils
- (d) Basophils

23. Amount of oxygen absorbed by one gram of haemoglobin is:

- (a) 1.34 ml
- (b) 13.4 ml
- (c) 20 ml
- (d) 134 ml

24. Vital capacity of lung is equal to:

- (a)  $IRV + ERV + TV$
- (b)  $IRV + ERV + TV - RV$
- (c)  $IRV + ERV + TV + RV$
- (d)  $IRV + ERV$

25. Maximum amount of air that can be expired per minute at rest is: -

- (a) 5000ml
- (b) 6000- 8000 ml
- (c) 4800ml
- (d) 5200ml

26. Contraction of external intercostals muscles of the ribs pull the ribs:

- (a) Downward and outward
- (b) Upward and inward
- (c) Upward and outward
- (d) Upward and downward

27. Carbon monoxide present in Tobacco smoke:

- (a) Is carcinogenic
- (b) Causes gastric ulcers
- (c) Reduces  $O_2$  carrying capacity of blood
- (d) Raises blood pressure

28. Which of the following is correct regarding respiration?

- (a) No organism can live without respiration
- (b) It takes place at every time day night
- (c) It involves production of CO<sub>2</sub> and water
- (d) All of these

29. Pseudostratified epithelium is found in:

- (a) Oesophagus
- (b) Respiratory tract
- (c) Urinary tract
- (d) Kidneys

30. Partial pressure below arterial PO<sub>2</sub> causes:

- (a) Formation of bicarbonates
- (b) Formation of carbaminohaemoglobin
- (c) Production of carbonic acid
- (d) Release of CO<sub>2</sub> from the cell.

## ANSWER KEY

---

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	b	a	a	c	b	a	c	b	a	b
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	C	d	c	b	d	a	b	b	a	c
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	b	b	a	a	b	c	c	d	b	d