

Unit 10: Human Respiratory System

Multiple Choice Questions

MULTIPLE CHOICE QUESTIONS (EXERCISE)

1. During inhalation, diaphragm;
 - (a) Contracts and moves upward
 - (b) Contracts and moves downward
 - (c) Relaxes and moves upward
 - (d) Relaxes and moves downward

2. Which part of the respiratory system acts as the respiratory surface?
 - (a) Larynx
 - (b) Trachea
 - (c) Bronchi
 - (d) Alveoli

3. How many oxygen molecules can attach with a haemoglobin molecule?
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4

4. What is TRUE about respiratory pigments?
 - (a) Transport oxygen from lungs to tissues
 - (b) Transport oxygen and carbon dioxide in equal amounts
 - (c) Transport less oxygen and more carbon dioxide
 - (d) Regulate the pH of blood

5. Which respiratory pigment is found in muscle tissue?
 (a) Haemoglobin (b) Melanin
 (c) Myoglobin (d) Chlorophyll
6. What is the maximum amount of air that can be inhaled or exhaled during a respiratory cycle?
 (a) Tidal volume
 (b) Vital capacity
 (c) Inspiratory reserve volume
 (d) Expiratory reserve volume
7. In what form is carbon dioxide primarily transported in the bloodstream?
 (a) Dissolved in plasma
 (b) Bound to haemoglobin
 (c) Converted to bicarbonate ions
 (d) None of the above
8. Which of the following treatments is commonly used to manage pulmonary TB?
 (a) Antibiotics (b) Cough syrup
 (c) Surgery (d) Chemotherapy
9. Which of the following is a common cause of pneumonia?
 (a) Bacterial infection
 (b) Viral infection
 (c) Fungal infection
 (d) All of these
10. Emphysema is characterized by:
 (a) Inflammation of airways
 (b) Narrowing of airways
 (c) Destruction of the alveoli in lungs
 (d) Fluid build-up in lungs

SLO BASED MULTIPLE CHOICE QUESTIONS

Respiratory System of Man

11. Which is included in cellular respiration?
 (a) Glycolysis
 (b) Krebs Cycle
 (c) Electron Transport chain
 (d) All of these
12. It is part of upper respiratory tract:
 (a) Nasal cavity (b) Trachea
 (c) Bronchi (d) Bronchioles
13. Nasal cavity contains chemoreceptors needed for:
 (a) Sense of taste (b) Sense of touch
 (c) Sense of smell (d) Sense of hearing
14. Pharynx is part of both respiratory system and:
 (a) Digestive system
 (b) Nervous System
 (c) Excretory system
 (d) Reproductive system
15. Voice box in humans is infact:
 (a) Pharynx (b) Larynx
 (c) Syrinx (d) Glottis
16. During swallowing epiglottis closes:
 (a) Pharynx (b) Glottis
 (c) Nasal cavity (d) Esophagus
17. Wall of trachea has which type of rings of cartilage:
 (a) A shaped (b) B-shaped
 (c) C-shaped (d) D-shaped
18. Cartilage plates are not present in:
 (a) Trachea (b) Bronchi
 (c) Bronchioles (d) Epiglottis
19. Pleura cavity of lungs is filled with:
 (a) Air (b) Blood
 (c) Fluid (d) Mucus
20. The right lung is large and contains how many lobes:
 (a) Five (b) Two
 (c) Three (d) Four

21. Which provide the respiratory surface where gas exchange takes place?

- (a) Diaphragm (b) Pleura
(c) Alveolus (d) Nasal cavity

22. Cluster of alveoli contains alveoli:

- (a) 2 to 2 (b) 20 to 30
(c) 200 to 300 (d) 2000 to 3000

23. Oxygen inside alveoli is absorbed by blood via:

- (a) Active transport
(b) Facilitated transport
(c) Diffusion
(d) Phagocytosis

24. In breathing role is played by:

- (a) Diaphragm and intercostal muscles
(b) Diaphragm and lung muscles
(c) Trachea and Bronchi
(d) Bronchioles and alveoli

25. Which is not true for inspiration?

- (a) Diaphragm relaxes
(b) Intercostal muscles contract
(c) Diaphragm contracts
(d) Pressure in lungs decreased

26. Intercostal muscles are related to:

- (a) Lungs (b) diaphragm
(c) Ribs (d) Trachea

27. Control of breathing is located in:

- (a) Medulla oblongata (b) Cerebrum
(c) Cerebellum (d) diaphragm

Transport of Gases

28. Whole blood carries oxygen almost:

- (a) 2 ml per liter
(b) 20 ml per liter
(c) 200 ml per liter
(d) 2000 ml per liter

29. Oxygen is bound to haemoglobin in:

- (a) Plasma (b) RBC
(c) WBC (d) Platelets

30. Partial pressure of oxygen in vein is:

- (a) 20 mm Hg (b) 200 mm Hg
(c) 40 mm Hg (d) 400 mm Hg

31. Partial pressure of oxygen in alveoli at sea level is:

- (a) 104 mm Hg (b) 105 mm Hg
(c) 106 mm Hg (d) 107 mm Hg

32. At 105 mm Hg of partial pressure of oxygen how much haemoglobin combines with oxygen.

- (a) 67% (b) 77%
(c) 87% (d) 97%

33. pH of blood is lowered by which gas produced by tissue:

- (a) Oxygen (b) CO₂
(c) Xl₂ (d) water vapours

34. Bohr effect shows effect of which factor on haemoglobins affinity for oxygen:

- (a) O₂ (b) N₂
(c) Temperature (d) pH

35. Approximately 72% of CO₂ is carried in blood as:

- (a) Carbonate ions
(b) Bicarbonate ions
(c) Acetate ions
(d) Carbonic acid ions

36. In Hamburger phenomenon which ion is involved:

- (a) Na⁺ ion (b) Cl⁻ ion
(c) K⁺ ion (d) Ca⁺⁺ ion

37. Chloride shift is related to transport of:

- (a) NaCl (b) CO₂
(c) O₂ (d) N₂

38. Myoglobin provide oxygen to:

- (a) Muscles (b) Blood
(c) Lymph (d) Water

39. Haemoglobin is composed of how many globin polypeptide chain/s:

- (a) One (b) Two
(c) Three (d) Four

Respiratory Pigments

40. Which of following are respiratory pigments?
- Albumin & Globulin
 - Haemoglobin
 - Myoglobin
 - Both (b) & (c)
41. Number of oxygen (O_2) molecules, one haemoglobin can carry:
- 1
 - 2
 - 3
 - 4
42. The polypeptide chain of haemoglobin are held together by:
- Peptide bonds
 - Phosphodiester bonds
 - Salt bridges, hydrogen bonds and hydrophobic effects
 - Disulfide bridge
43. Which statement is correct about myoglobin?
- It contains four peptide chains
 - It is found in RBCs
 - It is a monomer with single haem group.
 - It transports four O_2 molecules.
44. When does oxyhaemoglobin release oxygen?
- When body temperature decreases
 - When partial pressure of oxygen is above 100mmHg
 - When partial pressure of oxygen is below 20mmHg.
 - When partial pressure of oxygen is equal to 20mmHg.
45. The number of amino acids in α -chain of Haemoglobin:
- 140
 - 146
 - 141
 - 142
46. The number of amino acids in β -chain of Haemoglobin:
- 148
 - 146
 - 149
 - 145

47. Single polynucleotide chain of myoglobin has ___ amino acids.

- 152
- 153
- 141
- 146

Respiratory Disorders

48. Which disease affects ear:
- Sinusitis
 - Pneumonia
 - Pulmonary tuberculosis
 - Otitis media
49. Plugged nose, pus like nasal discharge, loss sense of smells are symptoms of:
- Sinusitis
 - Pneumonia
 - Otitis media
 - Tuberculosis
50. Accumulation of fluid in Eustachian tube causes which diseases:
- Sinusitis
 - Pneumonia
 - Otitis media
 - Tuberculosis
51. Pneumonia is a form of acute respiratory infection affects:
- Alveoli
 - Trachea
 - Bronchi
 - Bronchioles
52. Cause of tuberculosis is:
- Malnutrition
 - Unhygienic environment
 - Mycobacterium
 - Streptococcus
53. Which part of the body is affected in pulmonary tuberculosis:
- Lungs
 - Kidney
 - Heart
 - Eyes
54. Emphysema is breakdown of:
- Trachea
 - Bronchi
 - Bronchioles
 - Alveoli
55. Inflammation of lining that surround nasal cavity is known as:
- Pneumonia
 - Bronchitis
 - Otitis media
 - Sinusitis

56. Nebulization can be useful in reducing inflammation of nose to treat which disorder?
 (a) Emphysema
 (b) Sinusitis
 (c) Otitis media
 (d) Chronic Bronchitis
57. Growth of bacteria and viruses in the middle ear leads to which disorder?
 (a) Pulmonary tuberculosis
 (b) Otitis media
 (c) Pneumonia
 (d) Sinusitis
58. Which one is single largest infectious disease and cause of death in children worldwide?
 (a) Pneumonia (b) Sinusitis
 (c) Emphysema (d) Tuberculosis
59. Which infectious entities cause pneumonia?
 (a) Rhinovirus
 (b) Streptococcus pneumonia
 (c) Fungi
 (d) All
60. Small cavities and holes formation in lung tissues are due to?
 (a) Emphysema
 (b) Bronchitis
 (c) Pulmonary tuberculosis
 (d) Pneumonia
61. Emphysema can also be caused by deficiency of which protein?
 (a) alpha – 1 antitrypsin
 (b) alpha – 2 antitrypsin
 (c) beta – 1 antitrypsin
 (d) beta – 2 antitrypsin

ANSWER KEY

1.	b	2.	d	3.	d	4.	a	5.	c	6.	b	7.	c	8.	a
9.	d	10.	c	11.	d	12.	a	13.	c	14.	a	15.	b	16.	b
17.	c	18.	c	19.	c	20.	c	21.	c	22.	b	23.	c	24.	a
25.	a	26.	c	27.	a	28.	c	29.	b	30.	c	31.	b	32.	d
33.	b	34.	d	35.	b	36.	b	37.	b	38.	a	39.	d	40.	d
41.	d	42.	c	43.	c	44.	c	45.	c	46.	b	47.	b	48.	d
49.	a	50.	c	51.	a	52.	c	53.	a	54.	d	55.	d	56.	b
57.	b	58.	a	59.	d	60.	c	61.	a						