



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

RESPIRATION

Textbook Evaluation Questions Solved

1. The number of ATP molecules formed by complete oxidation of one molecule of pyruvic

acid is

A. 12

B. 13

C. 14

D. 15

Answer: D

2. During oxidation of two molecules of cytosolic NADH $+H^+$, number of ATP molecules produced in plants are

- A. 3
- B.4
- C. 6
- D. 8

Answer: A



3. The compound which links glycolysis and

Kerbs cycle is

A. succinic acid

B. pyruvic acid

C. acetyl CoA

D. citric acid

Answer: C

4. Assertion (A) : Oxidative phosphorylation takes place during the electron transport chain in mitochondria.
Reason (R) : Succinyl CoA is phosphorylated into succinic acid by substrate

phosphorylation.

A. A and R is correct, R is correctexplanation of AB. A and R is correct, but R is not the

correct explanation of A

C. A is correct but R is wrong

D. A and R is wrong

Answer: B

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5. Which of the following reaction is not involaved in Krebs cycle.

A. Shifting of phosphate from 3C to 2C

B. Splitting of Fructose 1,6 bisphosphate of

into molecules 3 C compounds

C. Dephosphorylation from the substrates

D. all of the these

Answer: B

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6. What are enzymes involved in phosphorylation and dephosphorylation reaction in EMP pathway ?

7. Respiratory quotient is zero in succulent plants. Why ? give the equation and respiratory quotient value.



8. Explain the reactions taking place in mitochondrial inner membrane.



9. What is the name of alternate way of glucose breakdown ? Explain the process involved in it.



10. How will you calculate net products of one

sucrose molecule upon complete oxidation

during aerobic respiration as per recent view ?



- 1. Which of the following is NOT a respiratory
- substrate in floating respiration ?
 - A. Carbohydrate
 - B. Fat
 - C. Organic acids
 - D. Protein







3. Amount of energy released when an ATP molecule is hydrolysed is

A. 2.7 k cal

B. 7.3 k cal

C. 2.8 k cal

D. 6.5 k cal

Answer: B

4. is called as the universal energy

currency of the cell.

A. ATP

B. GTP

C. UTP

D. AMP

Answer: A

5. Which step is irrelevant with respect to aerobic respiration?

A. Glycolysis

B. Pyruvate oxidate

C. Fermention

D. TCA cycle

Answer: C



.....

A. Mitochondria

B. Golgi bodies

C. Nucleus

D. Cytoplasm

Answer: D

A. Adlolase

B. Phosphofructo isomerase

C. Hexokinase

D. Exolase

Answer: C

8. Glucose is a Carbon compound.

A. Six

B. Five

C. Three

D. Four

Answer: A



9. Which among the following step is common

in both aerobic and anaerobic respiration ?

A. Pyruvate oxidation

B. Glycolysis

C. ETC

D. TCA cycle

Answer: B

10. Net gain of ATP's at the end of glycolysis is

A. 2

.....

B.4

C. 6

D. 8

Answer: A

11. Which statement is NOT - correct in concern

with glycolysis?

(i) Preparatory phase is also called hexose phase.

(ii) Pay off phase is also called hexone phase.

(iii) Two ATP's are consumed in preparatory phase.

(iv) Gylcolysis is also called EMP pathway.

A. only (i)

B. only (ii)

C. (iii) and (iv)

D. only (iii)

Answer: B





A. Cytoplasm

B. Mitochondrial matrix

C. Inner membrane of mitochondria

D. Both cytoplasm and mitochondrial

membrane

Answer: B

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13. Kreb's cycle isin nature.

A. Anabolic

B. Catabolic

C. Amphoteric

D. Amphibolic

Answer: D

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14. F_1 particles are also referred as

A. Polysomes

B. Oxysomes

C. Mesosomes

D. Liposomes





15. On oxidation in mitochondria one molecule of $NADH_2$ yieldATPs.

A. 2

B.4

C. 3

D. 1

Answer: C



16. Which cell organelles are referred as "power house " ?

A. Golgi bodies

- B. Endoplasmic reticulum
- C. Nucleus
- D. Mitochondria

Answer: D



17. Identify the electron transport chain inhibitors prevents e^- flow from cytochrome a_3 to O_2 .

A. 2, 4 DNP

B. Cyanide

C. Oligomycin

D. Rotenone

Answer: B



18. Pick out the correct statement(s).

(i)
$$R_Q = rac{\text{Volume of} CO_2 \text{liberated}}{\text{Volume of} O_2 \text{consumed}}$$

(ii) $R_Q = rac{\text{Volume of} O_2 \text{consumed}}{\text{Volume of} O_2 \text{liberated}}$
(iii) $R_Q = rac{\text{Volume of} O_2 \text{liberated}}{\text{Volume of} CO_2 \text{consumed}}$
(iv) $R_Q = rac{\text{Volume of} CO_2 \text{liberated}}{\text{Volume of} CO_2 \text{consumed}}$

A. only (i)

B. only (ii)

C. both (i) and (iii)

D. both (ii) and (iv)

Answer: A



19. Respiratory quotient of glucose in presence

of oxygen is

A. Unity

B. Infinity

C. Less than unity

D. Zero

Answer: A

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20. Number of CO_2 molecules generated in

Kreton cycle is

A. 2

B.4

C. 6

D. 8

Answer: B



21. Calculate the respiratory quotient from the

following equation

 $C_4H_6O_5 + 3O_2
ightarrow 4CO_23H_2O + {
m Energy}$

A. Unity

B. More than unity

C. Less than unity

D. Zero

Answer: B

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22. Identify the wrong statement regarding fermentation.

(i) Fermentation can also be called anaerobic respiration.

(ii) In anaerobic respiration, O_2 is not evolved.

(iii) Sargassum undergoes anaerobic respiration.

(iv) In anaerobic respiration, CO_2 is envolved.

A. only (iv)

B. only (ii)

C. Only (iii)

D. Both (ii) & (iv)

Answer: C

23.is an alternate way for glucose break down.

A. Glycolysis

B. Fermentaion

C. Respiration

D. HMP shunt

Answer: D

24.is used for the synthesis of

anthocyanin.

A. Ribulose

B. Erythrose

C. Sedoheptulose

D. Xylulose

Answer: B

25. Mention the optimum temperature for

respiration?

A. $25^{\,\circ}\,C$

- B. $30^{\circ}C$
- C. $26^{\circ}C$
- D. $28^{\,\circ}\,C$

Answer: B



1. Define the term Respiration.

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2. What do you mean by Respiratory substrate

? Give example.
3. Write the overall equation of respiration.



6. Name the types of compensation point.



7. What is an universal energy currency of the

cell?

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8. Who discovered ATP ? Name any two other high energy compounds in the cell similar to



11. Name the stages of aerobic respiration.



13. Mention the two phase of Glycolysis.



15. What is substrate level phosphorylation?

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16. Define the term Enolation.

17. List the products of Glycolysis.

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18. Who discovered TCA cycle ? Where does it

occurs?



19. Draw and label the structure of oxysomes.



21. Krebs cycle is an amphibolic pathway -

Comment.





27. Calculate the respiratory quotient for the

following equation.

 $C_6H_{12}O_6
ightarrow 2CO_2 + 2C_2H_5OH + {
m Energy}$



28. What is the signficance of respiratory quotient ?

29. Define fermentation and mention its types .



31. Observe the given diagram given below and

answer the questions.

(a) Name the apparatus set up.

(b) Mention the purpose of the apparatus.







32. Name the scientists who discovered HMP

shunt. Also expand the term HMP shunt.

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Additional Questions Solved Short Answer Type Questions

1. Differentiate floating and protoplasmic respiration.







6. Write the overall equation for glycolysis.



9. How fats and protein enter the krebs cycle?



10. Give examples of electron transport chain

inhibitors .

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11. Give a brief account on Alcoholic fermentaion.



13. What are the characteristics of anaerobic

respiration ?

14. Differentiate Glycolysis and fermentation.



Additional Questions Solved Long Answer Type Questions **1.** Explain the phase of glycolysis.



4. Draw a Flow chart of Kreb's cycle.



6. Explain Kuhne's fermentation experiment.

7. What are the factors which affect

transpiration?

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Additional Questions Solved Higher Order Thinking Skills Hots

1. Glycolysis and Kreb's cycle both are energy yielding pathways is aerobic respiration. How these two pathways differ among themselves ?



2. Anaerobic respiration is usually noticed in lower organisms. Human being is an advanced organism whether anaerobic respiration occur in man? If so when and where does it takes place.



3. Complete the formula of respiratory quotient by naming A and B . Also mention what type of substrate has respiratory quotient of 1 and > 1?

Respiratory Quotient = $\frac{A}{B}$

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4. The Flow Chart given below depicts the preparatory phase of glycolysis pathway.Complete it by filling the missing steps A, B, C

and also indicate whether ATP is being used

up or released at Step D.



5. The energy yield in term of ATP is higher is aerobic respiration than during anaerobic respiration - Discuss.



6. Answer the following questions in concern with TCA cycle.

(a) Where does it takes place ?

(b) When and by whom it was discovered ?

(c) Name the first formed product of the cycle.

(d) How many ATP molecules are generated per cycle ?

(e) TCA cycle is a amphibolic pathway. Say yes

or no. Why?



7. Mention the fate of pyruvic acid in a cell,

under the given circumstances.



In Text Questions Solved

1. It is advised not to talk or laugh louder while

eating. Can you give the reason?





2. The rate of breathing in aquatic animals is faster than the terrestrial animals. Give reason.

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3. Why do people snore?

4. You are at high level in a mountain above

the sea level. Suddenly you get palpitation

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5. breathing through nose is healthier than

breathing through mouth why



Textbook Evaluation Questions Solved Multiple Choice Questions 1. Breathing is controlled by

A. cerebrum

B. medulla oblongata

C. cerebellum

D. pons

Answer: B

2. Intercostal muscles are found between the

A. vertebral column

B. sternum

C. ribs

D. glottis

Answer: C



3. The respirfitory structures of insects are

A. tracheal tubes

B. gills

C. green glands

D. lungs

Answer: A

4. Asthma is caused due to

A. intlammation of bronchus and

bronchioles

B. inflammation of branchiole

C. damage of diaphragm

D. infection of lungs

Answer: D

5. The Oxygen Dissociation Curve is

A. sigmoid

- B. straight line
- C. curved
- D. rectangular hyperbola

Answer: A



6. The Tidal Volume of a normal person is

A. 800 mL

B. 1200 mL

C. 500 mL

D. 1100- 1200 mL

Answer: C

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7. During inspiration, the diaphragm

A. expands
B. unchanged

C. relaxes to become dome-shaped

D. contracts and flattens

Answer: D

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8. CO_2 is transported through blood to lungs

as

A. carbonic acid

- B. oxyhaemoglobin
- C. carbamino haemoglobin
- D. carboxy haemoglobin

Answer: C

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9. When 1500 mL air is in the lungs, it is called

A. vital capacity

B. tidal volume

C. residual volume

D. inspiratory reserve volume

Answer: B

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10. Vital Capacity is

A. TV+IRV

B.TV + ERV

C. RV+ ERV

D. TV + TRV + ERV

Answer: D

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11. After a long deep breath, we do not respire

for some second due to

A. more CO_2 in the blood

B. more O_2 in the blood

C. less CO_2 in the blood

D. less O_2 in the blood

Answer: B

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12. Which of the following substances in tobacco smoke damage the gas exchange system?

A. carbon monoxide and carcinogens

B. carbon monoxide and nicotine

C. carcinogens and tar

D. nicotine and tar

Answer: D



13. Column I represents diseases and column II

represents their symptoms.

Column–I		Column–II
(P) IC		i. maximum volume of air breathe in after forced.
(Q) EC		ii. Volume of air present after expiration in lungs.
(\mathbb{R}) VC		iii. Volume of air inhaled after expiration.
(S) FRC		iv. Volume of air present after expiration in lungs.
	~ ~ .	

A. P- iii , Q -ii , R -i

D. P= ii , Q= *i* , R = iii

Answer: A

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14. Which of the following best describes the

processof gas exchange in the lungs?

A. Air moves in and out of the alveoliduring breathingB. Carbon dioxide diffuses fromdeoxygenatcd blood in capillaries into

the alveolar air.

C. Oxygen and carbon dioxide diffuse down

their concentration gradients between

blood and alveolar air.

D. Oxygen diffuses from alveolar air into

deoxygenated blood

Answer: C

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Column–I (P) IC	i. maximum volume of air breathe in after forced.
(Q) EC	ii. Volume of air present after expiration in lungs.
(R) VC (S) FRC	 Volume of air inhaled after expiration. Volume of air present after expiration in lungs
	() B B B B

A. P- *i* , Q - ii , R - iii , S- iv

B. P - ii , Q - iii , R -iv , S -i

C. P-ii , Q - iii , R- *i* , S- iv

D. P- iii , Q - iv , R- *i* , S- ii

Answer: D

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16. Make the correct Pairs .

Column I

Column II

- i) 1000 to 1100 ml (P) Tidal volume
- (Q) Residual volume ii) 500 ml
- (R) Expiratory reserve iii) 2500 to 3000 ml volume
- Inspiratory reserve iv) 1100 to 1200 ml (S) volume

A. P- ii , Q - iv , R - *i* , S - iii

B. P-iii , Q- ii , R- iv , S- *i*

C. P- ii , Q- iv , R - iii , S- *i*

Answer: A

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Textbook Evaluation Questions Solved Very Short Answer Question

1. Name the respiratory organs of flatworm, earthworm, fish, prawn, cockroach and cat.





3. Air moving from the nose to the trachea passes1 through a number of structures. List in order of the structures.



4. Which structure seals the larynx when we

swallow?

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Textbook Evaluation Questions Solved Short Answer Question

1. Resistance in the airways is typically low.

Why? Give two reasons.

2. Low concentration of oxygen in the blood and tissue of people living at high altitude is due to



3. Why is pneumonia considered a dangerous

disease?

4. Diffusion of gases occurs in the alveolar region only and not in the other parts of respiratory system. Why?



5. Sketch a flow chart to show the path way of

air flow during respiration.



6. Explain the conditions which creates problems inoxygen transport.
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Entrance Examination Questions Solved Choose The Correct Answer

1. The length of human trachea is about

A. 6 inches

B. 12 cm

C. 12 inches

D. 18 cm

Answer: B



2. Hamburger's phenomenon is also known as

A. HCO_3^- shift

B. Na^+ shift

C. H^+ shift

D. Chloride shift

Answer: D

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3. Oxygen carrying capacity of blood is

A. 0.2

B. 0.3

C. 0.4

D. 50%.





4. Respiratory movements are controlled by

A. Cerebellum

- B. Cercbrum
- C. Medulla oblongata
- D. Crura cerebri

Answer: C



5. At higher CO_2 concentration, oxveen

dissociation curve of haemoglobin will

A. Move to left

B. Move to right

C. Become irregular

D. Move upwardly

Answer: B





6. Chloride shift is required for transport of

A. Nitrogen

B. Oxygen

C. Carbon dioxide

D. Carbon dioxide and oxygen

Answer: C

7. Volume of air inspired or expired with each

normal breath is known

A. Inspiratory capacity

B. Total Lung capacity

C. Tidal volume

D. Residual volume

Answer: C

8. Oxygen haemoglobin dissociation curve will

shift to right on decrease of

A. Acidity

B. Carbon dioxide concentration

C. Temperature

D. pH

Answer: D

9. Double membrane pleural sac

A. Envelops the kidneys

B. Envelops the brain

C. Envelops the lungs

D. Lines the nasal passage

Answer: C

10. Volume of air remaining in lungs after maximum respiratory effort is

A. Vital capacity

B. Residual volume

C. Total lung capacity

D. Tidal volume

Answer: B

11. In expiration, diaphragm becomes

A. Flattened

B. Relaxed

C. Straightened

D. Arched

Answer: B

12. Carbon dioxide is transportea irom tissues

to respiratory surface by only

A. Plasma and erythrocytes

B. Plasma

C. Erythrocytes

D. Erythrocytes and leucocytes

Answer: A

13. The respiratory centre is present in the

A. Cerebellum

B. Medulla oblongata

C. Hypothalamus

D. Cerecbrum

Answer: B

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A. Trachea $\ o$ lung $\ o$ larynx -	\rightarrow
pharynx $ ightarrow$ alveoli	
B. Nose $ ightarrow$ larynx $ ightarrow$ pharynx -	\rightarrow
alveoli $ ightarrow$ bronchioles	
C. Nostrils $ o$ pharynx $ o$ larynx -	\rightarrow
trachea $ ightarrow$ bronchi $ ightarrow$ bronchio	les
ightarrow alveoli	
D. Nose $ ightarrow$ mouth $>$ lungs .	

Answer: C

15. Which is false ?

A. Blood from right side of heart is carried

to lungs by pulmonary artery

B. Pleura is double covering of kidney

C. Pancreas is both exocrine & endocrine

gland

D. Scury is due to vitamin C deficiency

Answer: B



16. Volume of air breathed in and out during effortless respiration is ...

A. residual volume

B. vital volume

C. tidal volume

D. normal volume

Answer: C



17. Body tissue obtain oxygen from haemoglobin due to its dissociation in tissues is caused by......

A. Low oxygen concentration and high

carbon dioxide concentration

B. Low oxygen concentration

C. Low carbon dioxide concentration

D. High carbon dioxide concentration





18. Lungs have a number of alveoli for

- A. Having spongy texture and proper shape
- B. More surface area for diffusion of gases
- C. More space for increasing
- D. More nerve supply

Answer: B



19. Presence of large number of alveoli around alveolar ducts opening into bronchioles in mammalian lungs is

A. Inefficient system of ventilation with

little of residual air

B. Inefficient system of ventilation with

high percentage of residualair

C. An efficient system of ventilation with no

residual air

D. An efficient system of ventilation with

little residual air

Answer: D

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20. During transport of CO_2 blood does not

become acidic due to

- A. Neutralisation of H_2CO_3 by Na_2CO_3
- B. Absorption by leucocytes
- C. Blood buffers
- D. Non-aceumulation

Answer: C

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21. At high altitude, RBCs of human blood will

A. Increase in number
B. Decrease in numnber

C. Decrease in size

D. increase in size

Answer: A

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22. CO_2 is transported through blood to lungs

as

A. as dissolved in blood plasma

- B. as carbonic acid
- C. as carbamino haemoglobin
- D. as carbamino haemoglobin and carbonic

acid

Answer: D

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23. About 70% of CO_2 transport ocurs

as.....ions .

- A. Dissolved in plasma
- B. Carbaminohaemoglobin complex
- C. Bicarbonate
- D. None of the above

Answer: C

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24. Trachea is lined with incomplete rings of

A. Fibrous cartilage

B. Calcified cartilage

C. Elastic cartilage

D. Hyaline cartilage

Answer: D

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25. Oxygen and carbon dioxide are transported in blood throughA. Platelets and corpuscles

B. RBCs and WBCs

C. WBCs and serum

D. RBCs and plasma

Answer: D

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26. When 1500 mL air is in the lungs, it is called

A. Tidal volume

B. Inspiratory reserve volume

C. Residual volume

D. Vital capacity

Answer: D



27. Which one protects the lungs?

A. Ribs

B. Vertebral column

C. Sternum

D. All the above

Answer: D

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28. Which one has the lowest value?

A. Tidal volume

B. Vital capacity

C. Inspiratory reserve volume

D. Expiratory reserve volume

Answer: B



29. A child was killed througn aspnyxlation. Post morturm confirmed it because a piece of lung put in water

- A. Settled down
- B. Kept floating
- C. Had blood spots
- D. None of the above





30. Amount of oxygen present in one gram of haemoglobin is

A. 20 ml

B. 1-34 ml

C. 13-4 ml

D. None of the above





31. A molecule of haemoglobin carries how many oxygen molecule

A. 1

B. 2

C. 3

D. 4





32. In carbon monoxide poisoning there is

A. Increase in carbon dioxide concentration

B. Decrease in oxygen availability

C. Decrease in free haemoglobin

D. None of the above

Answer: C



33. Exchange of gases in lung alveoli occurs through

- A. Active transport
- B. Osmosis
- C. Simple diffiusion
- D. Passive transport

Answer: C





34. Haemoglobin is

A. Vitamin

B. Skin pigment

C. Blood carrier

D. Respiratory pigment

Answer: D

35. Vocal cords occur in

A. Pharynx

B. Larynx

C. Glottis

D. Bronchial tube

Answer: B



36. The cells which do not respire

A. Epidermal cells

B. Sieve cells

C. Cortical cells

D. Erythocytes

Answer: D

37. Hiccough (hiccup) is due to activity of

A. Intercostal muscles

B. Food in air tract

C. Diaphragm

D. Inadequate oxygen in environment

Answer: C

38. Bicarbonate formed inside erythrocytes moves out to plasma while chloride of plasma pass into erythrocytes. The phenomenon is called.

- A. Bicarbonate shift
- **B.** Carbonation
- C. Hamburger phenomenon
- D. None of the above

Answer: C





39. Respiratory centre of brain is stimulated by

A. Carbon dioxide content in venous blood

B. Carbon dioxide content in arterial blood

C. Oxygen content in venous blood

D. Oxygen content in arterial blood

Answer: D

40. A higher CO_2 concentration of blood causes

A. Slow diffusion of CO_2 from blood

B. Slow transport of CO_2 from blood

C. Slow transport of O_2 from blood

D. Both A and B

Answer: C

41. Gases diffuse over the respiratory surface because of

A. O_2 is more in alveoli than in blood

B. O_2 is more in blood than in tissues

C. CO_2 is more in alveoli than in blood

D. PCO_2 is more in blood than in tissues

Answer: A

42. Dissociation curve of O_2 (which is dissociation from Hb) shifts to the rights A. O_2 concentration decrease B. CO_2 concentration decreases

C. CO_2 concentration increase

D. Chloride concentration increases

Answer: C

43. Thoracic cage of man is formed of

A. Ribs and sternum

B. Ribs, sternum and thoracic vertebrae

C. Ribs, sternum and lumbar vertebrae

D. Ribs and thoracic vertebrac

Answer: B

44. Vital capacity of lung is equal to

A. IRV+ERV+TV

B. IRV+ERV+TV-RV

C. IRV+ERV+TV+RV

D. IRV-+ERV

Answer: A

45. Dead space is

A. Upper respiratory tract

B. Nasal chambers

C. Alveolar space

D. Lower respiratory tract

Answer: A

46. Carbon monoxide contained in Tobacco smoke

- A. Is carcinogenic
- B. Causes gastric ulcers
- C. Reduces oxygen carrying capacity of

blood

D. Raises blood pressure

Answer: C



47. What is correct ?

A. Pulmonary ventilation is equal to alveolar ventilation B. Alveolar ventilation is less than pulmonary ventilation C. Alveolar ventilation is more than pulmonary ventilation D. Both are variable





48. Increase in CO_2 concentration shall cause

- A. Slower and shallower breathing
- B. Slower and deeper breathing
- C. Faster and deeper breathing
- D. No effect on breathing

Answer: C



49. Alveoli become enlarged and damaged with reduced surface area in heavy smokers. condition is called

A. Silicosis

- B. Emphysema
- C. Asthma
- D. Bronchitis

Answer: B



50. SARS is caused by a variant of

A. Pneumococcus pneumonia

- B. Common cold by Corona virus
- C. Asthma
- D. Bronchitis

Answer: B

51. During inspiration

A. Diaphragm and external muscles relax

B. Diaphragm and internal intercostal

muscles relax

C. Diaphragm and external intercostal

muscles contract

D. Diaphragm and internal intercostal

muscles contract





52. Mountain sickness at high altitude is due to

- A. Excess CO_2 in blood
- B. Decreased CO_2 in air
- C. Decreased partial pressure of oxygen
- D. Decreased efficiency of haemoglobin





53. Capacity of human lungs for air in a healthy person is

A. 3000 ml

B. 1500 ml

C. 1000 ml

D. 500 ml





54. Rate of breathing is controlled by

- A. Amount of freely available oxygen
- B. Carbon dioxide in blood
- C. Muscular functions of body
- D. All of the above

Answer: B



55. During strenuous exercise,glucose is

converted into

A. Glycogen

B. Pyruvic acid

C. Starch

D. Lactic acid

Answer: D





56. How much pulmonary air is expired normally? A. 0.7 B. 0.2 C. 0.25 D. 0.32

Answer: D

57. Which is incorrect ?

A. Presence of non-respiratory air sacs increases efficiency ot respiration in birds B. In insects, circulation body fluids serve to distribute oxygen to tissues C. Principle of counter - current flow

facilitates efficient respiration in gills of

fishes
D. Residual air in lungs slightly decreases

the efficiency of respiration in mammals

Answer: B

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58. Percentage of oxygen being caried by blood plasma is

A. 6-9%

B. 3-6%

C. 2-3%

D. 1-2%

Answer: C



59. Name of the pulmonary disease in which

alveolar surface area involved in gas exchange

is

A. Asthma

B. Pleurisy

C. Emphysema

D. Pneumonia

Answer: C

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60. Asthma may be attributed to

A. bacterial infection of the lungs

B. allergic reaction of the mast cells in the

lungs

C. inflammation of the trachea

D. accumulation of fluid in the lungs

Answer: B

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61. Name the chronic respiratory disorder caused mainly by cigarette smoking

A. Emphysema

B. Asthma

C. Respiratory acidosis

D. Respiratory alkalosis

Answer: A

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62. Lungs are made up of air-filled sacs, the alveoli. They do not collapse even after forceful expiration.

A. Inspiratory Reserve Volume

B. Tidal Volume

C. Expiratory Reserve Volume

D. Residual Volume

Answer: D

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Additional Questions Solved Multiple Choice Questions

- 1. Insects respire through
 - A. body surface
 - B. trachea
 - C. gills
 - D. book lungs

Answer: B



2. Which of the following does not belong to the conducting zone of the respiratory system

A. trachea

B. bronchioles

C. larynx

D. alveoli

Answer: D

3. The trachea is supported by the

A. long strueture

B. cartilage

C. multiple cartilaginous rings

D. ligaments

Answer: C

4. Which of the following is right regarding the bronchioles?

A. trachea divides into bronchioles

B. bronchioles have cartilaginous rings

C. bronchioles collapse when the air

pressure is more

D. bronchioles are without cartilaginous

rings







- 5. The lungs are protected ventrally by
 - A. vertebral column
 - B. sternum
 - C. ribs
 - D. diaphragm

Answer: B

6. The function of pleural fluid is to

A. keep the lungs intact

B. protect the lungs from getting firm

C. maintain the texture of the lungs

D. reduces friction when lungs expand and

contract

Answer: D

7. During inspiration

A. Diaphragm becomes dome shaped

- B. internal intercostal muscles contract
- C. volume of the thoracic chamber

increases

D. ribs are pulled downward

Answer: C

8. The amount of air inspired or expired with

each normal breath is called the

A. residual volume

B. inspiratory reserve volume

C. dead space

D. tidal volume

Answer: D

9. The normal value of IRVis

A. 500 mL

B. 2500-3000 mL

C. 1100-1200 mL

D. 150 mL

Answer: B

10. Expand the abbereviations of "UV" ?

A. EC

B. TLC

C. IC

D. VC

Answer: B

11. Which of the following is not involved in

gaseous exchange?

A. expiratory reserve volume

B. inspiratory reserve volume

C. residual volume

D. dead space

Answer: D

12. A molecule of haemoglobin carries how

many oxygen molecule

A. one

B. four

C. three

D. two

Answer: B

13. The ferric state of haemoglobin is called

A. binds with oxygen

B. binds with carbon dioxide

C. does not bind with oxygen

D. does not bind with carbon dioxide

Answer: C

.

14. Which of the following is incorrect with regard to the formation of oxyhaemoglobin in the

A. high pCO_2

B. less H^+ concentration

C. low pCO_2

D. low temperature

Answer: A

15. Carbon dioxide is carried in the RBCs as

A. bicarbonate ions

- B. carbon dioxide
- C. carbonic acid
- D. carbaminohaemoglobin

Answer: D



16. The formation of is catalysed by the enzyme carbonic anhydrase in RBCs

A. carbonates

B. carbaminohaemoglobin

C. carbonic acid

D. bicarbonates

Answer: C

17. Respiratory centre of brain is senstive to:

A. CO_2 alone

- B. H^+ alone
- $\mathsf{C}.O_2$
- D. CO_2 and H^+

Answer: D



18. Which is known as the respiratory rhythm centre?

A. cerebellum

B. pons varoli

C. medulla oblongata

D. infundibulium

Answer: C

19. When a person travels to higher elevations, he may develop the symptoms of acute mountain sickness. This is because of

A. nitrogen narcosis

B. high level of carbon dioxide in blood

C. low immunity

D. poor binding of O_2 with haemoglobin

Answer: D

20. Ervthropoietin hormone stimulates the

bone marrow to produce more

A. WBCs

B. RBCs

C. Platelets

D. Electrolytes

Answer: B

21. When a person goes deep into the sea, he/she develops complications due to

A. increased partial pressure of O_2

B. increase in blood nitrogen content

C. increased partial $pressure of CO_2$

D. decrease in the pressure in the

surrounding water

Answer: B

22. Scuba divers need to face the problem of

A. nitrogen narcosis

B. low oxygen content

C. high carbon dioxide content

D. lower pressure

Answer: A

23. Narrowing and inflammation of bronchi

and bronchioles is called as

A. emphysema

B. bronchitis

C. asthmna

D. pneumonia

Answer: C

24. Gradual break down of the thin walls of the

alveoli decreasing the total surface area of the

gaseous exchange is

A. bronchitis

B. emphysema

C. asthma

D. tuberculosis

Answer: B

25. What causes bronchitis?

A. Decrease in the surface area of alveoli

- B. inflammation of bronchi and bronchioles
- C. inflammation of bronchi
- D. collection of fluid in the bronchi

Answer: C



26. Which of the following is caused by bacteria?

A. pneumonia

B. emphysema

C. silicosis

D. tuberculosis

Answer: D

disorders?

A. tuberculosis

B. emphysema

C. silicosis

D. pneumonia

Answer: C

28. Why does smoking affect oxygen supply to the body?

A. haemoglobin fails to bind with O_2

B. haemoglobin binds with carbon

monoxide

C. Nicotine makes the heart heat faster

D. Blood vessels are narrowed

Answer: B



29. COPD is the

A. emphysema and chronic bronchitis

B. asthma and emphysema

C. emphysema

D. asthma, chronic bronchitis and

emphysema

Answer: D

1. Oxygen is necessary for breakdown of...... to

release energy

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2.....produce sound in human beings.
3.are the respiratory organs in most of

the aquatic arthropods and molasses.



4. The ciliated epithelial cells lining the

trachea, bronchi and bronchioles secrete......



5.divides thoracic cavity and abdominal cavity.
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6. The movement of air between the

atmosphere and the lungs is known as......

7. is the movement of atmospheric air into the lungs.
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8. In a relaxed stage, the diaphragm is



9. The expulsion of air from the lungs to the

atmosphere is known as......

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10. Name the instrument which is used to

measure the volume of air in breathing?

11. The volume of air remaining in the lungs

after a forceful expiration is

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12. The maximum volume of air that can be moved out during a single breath following a maximal

13. The total volume of air a person can exhale

after normal inspiration is.....

Watch Video Solution

14. The total volume of air a person can exhale

after normal inspiration is......

15. The volume of air remaining in the lungs

after a forceful expiration is

Watch Video Solution

16. The amount of air that nmoves into the

respiratory passage per minute is called......

17. Which of the following is not involved in

gaseous exchange?

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18.the pressure contributed by an

individual gas in a mixture of gases.



19. Hacmoglobin belongs to the class of



21. The ferric state of haemoglobin is called

•••••

22. the respiratory pigment present in

the blood.



23. The blood of human being is red due to

the presence of......

24. Every 100 mL of oxvgenated blood can

deliver about mL of O_2 to the tissues

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25. About 70% of CO_2 transport ocurs

as.....ions .

26. The reversible reaction of formation of carbonic acid from carbon dioxide and water is catalyzed by the enzyme called



27.centre present in pons Varoli region of

the brain moderates the function of

respiratory rhythm centre.

28.is the hormone secreted by kidneys to

stimulate bone marrow to produce more RBCs.



29. The increase in the nitrogen content in

blood heads to a condition called......

30. The skin turns bluish black during poisoning Watch Video Solution

31. Dust, drugs, pollen grains, fish, prawns are

common...... for asthma.

32. Cigarette smoking reduces the respiratory

surtace of the alveolar walls and it is known as



33. Cough, shortness of breath and sputum in

the lungs are the symptoms of......



34. Tuberculosis is caused by the bacterium



35. Collection of fluid between the lungs and

chest wall is the main symptoms of _____.

36. Long exposure to dust gives rise to

innflammation leading to......

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37.and asbestosis are occupational

respiratory diseases resulting from inhalation



cigarette smoke that causes addiction.



42. A non-smoker who inhales cigarette smoke

involves in smoking

43. Emphysema, chronic bronchitis and asthma, COPD, cancer may be caused due to.....



44. Cigarette smoke contains thousands of chemicals and even small quantities of



45. The.....present in the cigarette smoke

damages the gaseous exchange

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Additional Questions Solved Answer The Following Questions

1. What is excretion?

2. List the functions of the respiratory system



3. The rate of breathing in aquatic animals is faster than the terrestrial animals. Give reason.

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4. What is the function of hairs and mucus in

the nasal cavity?





10. What are the characteristic features of

respiratory surface?



11. Explain the human respiratory system.



12. Explain the mechanism of breathing.







16. How does gaseous exchange take place in

the alveoli?

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17. Write a note on respiratory pigments.

18. Explain the transport of oxygen in blood .



20. How is respiration regulated?

21. Write the flow chart of the events during

inspiration and expiration .



22. What is nitrogen narcosis ? What is its effect ?

23. Explain the disorders of the respiratory system .

24. What are the effects of smoking?