



BIOLOGY

BOOKS - ICSE

RESPIRATORY SYSTEM

Topic 11 Mark Questions

1. During expiration, the diaphragm :

A. i) Expands

B. ii) Relaxes

C. iii) Contracts

D. iv) Folds

Answer: B

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2. The ultimate end parts of the respiratory system in human are known as:

A. Tracheoles

B. Bronchi

C. Alveoli

D. Bronchioles

Answer: C

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3. During respiration there is :

A. loss in dry weight

B. no change in dry weight

C. increase in the overall weight

D. gain in dry weight

Answer: A



4. Name the following : The physical process

by which air is taken in and forced out of the

lungs.



5. Name the following : The chemical compound inside a cell can be termed "Currency of Energy".



6. Choose the ODD one out from the following terms given and name the CATEGORY to which the others belong:
Nasal cavity, Oral cavity, Larynx, Pharynx, Trachea





7. Give the overall chemical reaction of anaerobic respiration in animals (human muscle cells).

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8. Name the two membranes covering the lungs.

1. Give appropriate biological / technical terms

: Cell organelle where Krebs cycle occurs.



2. Give appropriate biological / technical terms

: Present at the back of nostrils just above the

oral cavity.



3. Differentiate between the following pairs on

the basis of what is given in the brackets:

Glycolysis and Kreb.s cycle (Amount of energy

released)



4. Differentiate between the following pairs on

the basis of what is given in the brackets:

Pharynx and Alveolus (Location).



5. One should breathe through the nose and not through the mouth. Explain.

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6. The wall of the trachea is supported by .C.-

shaped cartilaginous rings. Explain



Topic 1 3 Marks Questions

1. Write the special functional activity of the following structures. For example :Kidney and excretion.

Mitochondria and





2. Write the special functional activity of the following structures. For example :Kidney and <u>excretion</u>.

Pleura and

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3. Write the special functional activity of the

following structures. For example :Kidney and



Alveoli and



4. Write the special functional activity of the

following structures. For example :Kidney and

excretion.

Diaphragm and

5. Write the special functional activity of the following structures. For example :Kidney and <u>excretion</u>.

Epiglottis and

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6. Write the special functional activity of the following structures. For example :Kidney and <u>excretion</u>.

.C. shaped cartilage and





7. Give one function : Ciliated epithelium lining

the respiratory tract

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8. Give one function : Intercostal muscles.

9. Give one function : Pleural fluid.



10. Differentiate between the following pairs on the basis of the aspect given in the brackets.

Aerobic and anaerobic respiration (end

products of the process).

11. Differentiate between the following pairs on the basis of the aspect given in the brackets.

Respiration and photosynthesis (gas released).



12. Differentiate between the following pairs on the basis of the aspect given in the brackets.

Respiration and breathing (organs involved).

13. What is the contribution of the following in

breathing?

Ribs

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14. What is the contribution of the following in

breathing?

Diaphragm

15. What is the contribution of the following in

breathing?

Abdominal muscles

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16. Name the body structure concerned with

the given functional activity :

Transports oxygen to the body cells

17. Name the body structure concerned with

the given functional activity :

Combines with the oxygen in the lungs.



18. Name the body structure concerned with

the given functional activity :

Provides actual diffusion of respiratory gases

in lungs.



19. Name the body structure concerned with the given functional activity :

Prevents food from entering the trachea during swallowing.

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20. Name the body structure concerned with

the given functional activity :

Helps to increase the volume of the chest cavity lengthwise.



21. Name the body structure concerned with

the given functional activity :

Protects the lungs from mechanical injuries.



Topic 1 5 Marks Questions

1. Mention the exact location : Pharynx









sequence beginning with the term that is underlined.

Larynx,Alveolus , Trachea , Bronchiole, $\underline{\mathrm{Nose}}$





7. Given below are sets of five terms each. Rewrite the terms in correct order in a logical sequence beginning with the term that is underlined.

Larynx, Pharynx, Bronchioles, <u>Nostrils</u>, Alveoli

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8. Given below are sets of five terms each. Rewrite the terms in correct order in a logical sequence beginning with the term that is underlined.

Pharynx, Nostril, Bronchi , Nasal cavity, Larynx

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9. Given below are sets of five terms each. Rewrite the terms in correct order in a logical sequence beginning with the term that is underlined.

Nostrils, Pharynx, $\underline{Alveoli}$, Larynx, Bronchioles



10. Given below are sets of five terms each. Rewrite the terms in correct order in a logical sequence beginning with the term that is underlined.

Primary bronchus, Trachea , Larynx, Pharynx, <u>Alveoli</u>

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11. Study the diagram given below and answer



Identify the above structure and mention its

location



12. Study the diagram given below and answer



Label the parts numbered as 1 and 2

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13. Study the diagram given below and answer



Name the structure which is involved in

gaseous exchange inside the lungs.



14. Study the diagram given below and answer



Name the protective inner lining of the

respiratory passage.

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15. Study the diagram given below and answer



Draw a neat, labelled diagram of the human

lungs.



16. Study the diagram given below and answer



Name the structure shown in the diagram.

State in which part of the body it is present.



the questions that follow:



Write the basic function of this structure.

the questions that follow:



Label the parts numbered as .1. and .2..

the questions that follow:



Name the protruding cartilage of the voice box that is only found in males.

the questions that follow:



How does this structure behave when you

swallow something?
the questions that follow:



Name the structure shown and label its parts

.1. and .2.



the questions that follow:



Which stage of pulmonary ventilation is shown in this diagram ? Give reason in support of your answer.

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the questions that follow:



State the function of parts labelled as 3 & 4.



the questions that follow:



Name the muscle responsible for the movement of the ribs.



the questions that follow:



Give the composition of expired air.

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26. (i)Draw a neat and labelled diagram of the human respiratory system.

(ii) Based on the diagram drawn above in (i), give a suitable term for each of the following descriptions:

1. A small cartilage flap that covers the glottis.

2. A structure covered with C-shaped cartilaginous rings.

3.Muscular portion that separates the thoracic

cavity and the abdominal cavity.

4. Scientific name of the voice box.

5. Cell organelle involved in aerobic

respiration.

6. The chemical process that takes place inside the cells.

7. The physical process involves in exchange of

gases between the organism and the environment.



27. Given below is an experimental setup to demonstrate a particular process in animals.Answer the questions that follow:



(i) Name the physiological process being

Little water

studied.

(ii) Define the process mentioned in (i).



28. Given below is an experimental setup to demonstrate a particular process in animals.

Answer the questions that follow:



What is the function of soda lime?



29. Given below is an experimental setup to demonstrate a particular process in animals. Answer the questions that follow:



After a few hours what will happen to the lime water in Bottle A and in Bottle B? Give suitable reasons for your answer.

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30. Given below is an experimental setup to demonstrate a particular process in animals.

Answer the questions that follow:



Write a balanced chemical equation for the

process carried out by the mouse.

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31. Study the experimental set-up given below and answer the following questions:



What is the aim of the experiment shown

above ?



32. Study the experimental set-up given below



What is your observation for flasks .A. and .B.?



33. Study the experimental set-up given below



Name the liquid filled in the test tube. Explain how the above mentioned chemical would interfere with the experiment.



34. Study the experimental set-up given below



Why were clips used in this experiment?

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35. Study the experimental set-up given below



Which is the control set-up and why?

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Topic 2 1 Mark Questions

1. The term used to refer the maximum volume of air the lungs can accommodate is :

A. Tidal volume

B. Vital capacity

C. Total lung capacity

D. Inspiratory capacity

Answer: c

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2. A person normally passively inhales and exhales 500 mL of air. This is the

- A. Tidal volume
- B. Inspiratory capacity
- C. Residual volume
- D. Vital capacity

Answer: a



3. Delivering oxygen to cells and collecting

carbon dioxide is called respiration.





Topic 2 2 Marks Questions

1. Give appropriate biological / technical terms

for the following:

Lack of oxygen at higher altitude.

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2. Give appropriate biological / technical terms

for the following:

Amount of air left in the lungs after maximum

expiratory effort.



3. What will happen if a person from a plain

goes to a mountain above 8000 ft?

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4. What is meant by : Residual air

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5. Dead space is

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6. Match the lung capacities in Column I with

the quantities given in Column II.

	Column I	Column II
A.	Residual air	4500 mL
B.	Vital capacity	6000 mL
C.	Total lung capacity	1500 mL
D.	Dead air space	150 mL



Topic 2 3 Marks Questions

 Differentiate between the following pairs on the basis of what is given in the brackets : Tidal volume and Residual volume (Volume of air in normal adults.)

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2. Differentiate between the following pairs on the basis of what is given in the brackets :

Inspiratory reserve volume and Expiratory

reserve volume (Volume of air)



3. Differentiate between the following pairs on

the basis of what is given in the brackets :

Inspiratory capacity and Vital capacity (Volume

of air)

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4. Explain briefly the following:

Alveolar air

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5. Explain briefly the following:

Total lung capacity

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6. Explain briefly the following:

Residual volume

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7. Explain briefly the gaseous transport in

human beings.

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Topic 2 5 Marks Questions

1. Complete the following paragraph by filling in the blanks (i) to (x) with appropriate words: The air breathed in and out in course of quiet breathing is termed as (i) Some tidal air is left in (ii) such as trachea and bronchi where no (iii) of gases can occur. (iv) is the air that can be drawn forcibly and (v).. is the air forcibly expelled. The volume of air that can be taken (vi) and (vii) by maximum inspiration and expiration is called (viii) Some (ix)

air is always left in the (x)..... even after

forcibly breathing out.



2. Study the diagram given below and answer



Name the structure given in the diagram.

State in which part of the body it is present.



3. Study the diagram given below and answer



Write the basic function of this structure.



4. Study the diagram given below and answer



Label the parts numbered as 1 and 2.



5. Study the diagram given below and answer



Name the fluid present inside the capillary.



6. Study the diagram given below and answer



State the total surface area of the alveoli.



7. Given below is a diagram depicting a physiological process in man.
Study the same and answer the following

questions :



Name the process occurring in the diagram.

Explain the process mentioned in part (i).



8. Given below is a diagram depicting a physiological process in man.
Study the same and answer the following questions :



Label the gases .X. and .Y..

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9. Given below is a diagram depicting a physiological process in man.

Study the same and answer the following questions :



Label the gases .X. and .Y..





10. Given below is a diagram depicting a physiological process in man.

Study the same and answer the following questions :


Name the organelle where cellular respiration

takes place.



11. Given below is a diagram depicting a

physiological process in animals.



increase volume of thoras:



Ribs swing up and Ribs swing down and reduce volume of theseas

Study the same and answer the following

questions:

Explain both the process shown in figure 'X.

and Y

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12. Given below is a diagram depicting a physiological process in animals.



increase volume of thoras:



Ribs swing up and Ribs swing down and reduce volume of thesaw

Study the same and answer the following questions:

Explain both the process shown in figure 'X.

and .Y..



13. Given below is a diagram depicting a physiological process in animals.



increase volume of thorax.



Ribs swing up and Ribs swing down and reduce volume of thoses

Study the same and answer the following questions:

Explain both the process shown in figure 'X.

and .Y..

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14. Given below is a diagram depicting a

physiological process in animals.



Ribs swing up and increase volume of thorax



Ribs swing down and reduce volume of thorax

Study the same and answer the following

questions:

Define tissue respiration.

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