



BIOLOGY

BOOKS - PEARSON IIT JEE

FOUNDATION

RESPIRATION IN PLANTS AND ANIMALS

Quick Recap

1. What is respiration?



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2. What are stomata?



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3. Why guard cells are important?



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4. What are Pneumatophores ?



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5. What is the difference between aerobic and anaerobic respiration?



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6. How do lower organisms like yeast respire?



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7. What is the mechanism of respiration seen in aquatic animals?



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8. What is cutaneous respiration? Give example.



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9. What is trachea?



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10. What are alveoli?



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11. What is pleural fluid? Why is it important?



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12. What is a diaphragm?



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Test Your Concepts Fill In The Blanks

1. Organisms derive energy they need from a chemical process called _____



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2. Physical process involving intake of O_2 and release of CO_2 is _____





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3. Respiration is done to breakdown _____ to release energy



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4. Gaseous exchange in plants occurs through _____



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5. Stoma is surrounded by two cells called _____ that help in closing and opening of stoma.



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6. _____ is a common passage for both digestive and respiratory systems.



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7. Respiratory pigment in human being is _____



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8. Bronchioles end up in small balloon-like structures called _____



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9. What is the other name of wind-pipe ?



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10. Lower organisms like yeast respire by



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11. The process of release of carbon dioxide out of the lungs is called _____



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Test Your Concepts Select The Correct Alternatives

1. Oxygen taken in during respiration is used to break down _____ produced as a result of photosynthesis.

A. glucose

B. protein

C. fats

D. vitamin

Answer: A



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2. Respiration is a ____ process, whereas breathing is ____ process.

A. physical, chemical

B. chemical, physical

C. physical, physical

D. chemical, chemical

Answer: B



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3. Respiration in plants occurs during _____

A. day

B. night

C. Neither (a) nor (b)

D. day and night

Answer: D



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4. Guard cells help in _____ of stomata.

A. opening

B. closing

C. Both opening and closing

D. None of these

Answer: C



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5. Which is correct for pneumatophores?

(i) Breathing roots

(ii) Roots of mangroves

(iii) Gives support to the plant

(iv) Facilitate aeration

A. (i),(ii),(iii)

B. (i),(ii),(iv)

C. (ii),(iii),(iv)

D. All are true

Answer: B



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6. Assertion (A): Guard cells regulate the rate of transpiration in plants.

Reason (R): They are found enclosing the opening through which transpiration takes place.

A. Both Assertion and Reason are true and Reason is the correct explanation for Assertion.

B. Both Assertion and Reason are true, and Reason is the not the correct

explanation for Assertion.

C. Assertion is true and Reason is false.

D. Assertion is false and Reason is true.

Answer: A



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7. Opening of pharynx into respiratory system

called _____

A. glottis

B. gullet

C. bronchus

D. alveoli

Answer: A



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8. _____ protects lungs.

A. Pleural membrane

B. Pleural fluid

C. Both (a) and (b)

D. Neither (a) nor (b)

Answer: C



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9. Cutaneous respiration is seen in _____

A. frog

B. fish

C. human

D. mangroves

Answer: A



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10. During inspiration ,

A. Ribs are lifted up and diaphragm is flattened

B. Ribs are flattened and diaphragm is lifted up

C. Both ribs and diaphragm are lifted up

D. Both ribs and diaphragm are flattened

Answer: A



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11. Haemoglobin is a/an ___ containing respiratory pigment

A. iron

B. copper

C. zinc

D. iodine

Answer: A



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12. Which one of the following respire only through skin?

A. Fish

B. Frog

C. Earthworm

D. Human

Answer: C



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13. Gaseous exchange takes place at _____

A. alveoli

B. bronchi

C. bronchioles

D. trachea

Answer: A



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14. Which one of the following is a wrong statement?

A. Pleural fluid protects the lungs from shock.

B. Lungs are covered by single membrane.

C. Air exchange takes place at alveoli.

D. Pharynx is common for both respiratory system and digestive system.

Answer: B



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Mastering The Concepts Knowledge And Understanding

1. Write the difference between breathing and respiration.



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2. What is the importance of respiration in plants?



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3. What is the difference between glottis and gullet?



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4. How are our lungs protected?



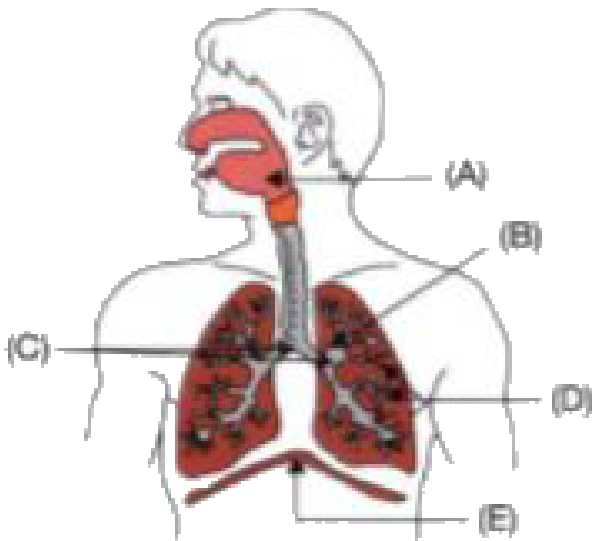
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5. Which is the respiratory pigment in human beings? State its function.



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6. Identify and label the parts.



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7. How do ribs and diaphragm help in respiration ?



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Mastering The Concepts Application And Analysis

1. Plants like mangroves have special mechanisms to respire'. Justify the statement



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2. Explain the process of respiration.



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3. Arrange the parts of human respiratory system in the order of oxygen transport.

Nostril

Trachea

Bronchiole

Bronchi

Capillaries

Tissue

Blood

Pharynx

Alveoli



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4. After finishing a race an athlete breathes faster and deeper than normal. Why?



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5. Do plants also breathe in oxygen? If yes, how?



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6. When we inhale too much of dust-laden air, we sneeze. Explain, why?



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7. It is commonly observed that we get cramps after heavy exercise. Give reason.



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8. It is observed that mountaineers carry oxygen at high altitudes. Give reason



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