



BIOLOGY

BOOKS - TRUEMAN'S BIOLOGY

(ENGLISH)

NCERT Exemplar Questions +1

(BREATHING AND EXCHANGE OF

GASES)

Mcqs

1. Respiration in insects is called direct because

A. the tissues exchange O_2/CO_2 directly

with the air in the tubes

B. the tissues exchange O_2/CO_2 directly

with coelomic fluid

C. the tissues exchange O_2/CO_2 directly

with the air outside through body sur-

face

D. tracheal tubes exchange O_2/CO_2

directly with the haemocoel which then
ex- change with tissues

Answer: d



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2. Regarding the functions of our respiratory system, mark the wrong entry

A. Humidifies the air

B. Warms up the air

C. Diffusion of gases

D. Cleans up the air

Answer: d



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3. A person suffers punctures in his chest cavity in an accident, without any damage to the lungs its effect could be

- A. reduced breathing rate
- B. rapid increase in breathing rate
- C. no change in respiration
- D. cessation of breathing

Answer: d



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4. It is known that exposure to carbon monoxide is harmful to animals because

- A. It reduces CO_2 transport
- B. It reduces O_2 transport
- C. It increases CO_2 transport
- D. It destroys hemoglobin

Answer: d



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5. Mark the true statement among the following with reference to normal breathing.

A. Inspiration is a passive process where as expiration is active

B. Inspiration is a active process where as expiration is passive

C. Inspiration and expiration are active processes

D. Inspiration and expiration are passive processes

Answer: b



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6. A person breathes in some volume of air by forced inspiration after having a forced expiration this quantity of air taken in is

- A. Total lung capacity
- B. Tidal volume
- C. Vital capacity
- D. Inspiratory capacity

Answer: a



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7. Mark the incorrect statement in context to O_2 binding to Hb.

A. Higher pH

B. Lower temperature

C. Lower pCO_2

D. Higher pO_2

Answer: d



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8. Mark the correct pair of muscles involved in the normal breathing in humans.

A. 1. External and internal intercostal muscles

B. 2. Diaphragm and abdominal muscles

C. 3. Diaphragm and external intercostal muscles

D. 4. Diaphragm and internal intercostal muscles

Answer: d



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9. Incidence of Emphysema - a respiratory disorder is high in cigarette smokers. In such cases

A. 1.the bronchioles are found damaged

B. 2. the alveolar walls are found damaged

C. 3. the plasma membrane is found damaged

D.4.the respiratory muscles are found
darn- aged

Answer: b



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10. Respiratory process is regulated by certain specialized centres in the brain. One of the following listed centres can reduce the inspiratory duration upon stimulation

A. Medullary inspiratory centre

B. Pneumotaxic centre

C. Apneustic centre

D. Chemosensitive centre

Answer: b



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11. CO_2 dissociated from carbamino haemoglobin when

A. pCO_2 is high pO_2 is low

B. pCO_2 is high and pCO_2 is low

C. pO_2 is high and pCO_2 is low

D. None of the above

Answer: b



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12. In breathing movements, air volume can be estimated by

A. Stethoscope

B. Hygrometer

C. Sphygmomanometer

D. Spirometer

Answer: d



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13. From the following relationship between respiration volumes and capacities, mark the correct option.

(i) Inspiratory Capacity (IC) = Tidal Volume +
Residual Volume

(ii) Vital Capacity (VC) = Tidal Volume (TV) +
Inspiratory Reserve Volume (IRV) + Expiratory
Reserve Volume (ERV)

(iii) Residual Volume (RV) = Vital Capacity (VC) -
Inspiratory Reserve Volume (IRV)

(iv) Tidal Volume (TV) = Inspiratory Capacity
(IC) - Inspiratory Reserve Volume (IRV)

A. (i) Incorrect, (ii) incorrect, (iii) Incorrect ·

(iv) Correct

B. (i) Incorrect, (ii) Correct, (iii) Incorrect (iv)

Correct

C. (i) Correct, (ii) Correct, (iii) Incorrect, (iv)

Correct

D. (i) Correct, (ii) Incorrect, (iii) Correct, (iv)

Incorrect

Answer: b



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14. The oxygen - haemoglobin dissociation curve will show a right shift in case of

A. High pCO_2

B. High pCO_2

C. Low pCO_2

D. Less H^+ concentration

Answer: b



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15. Match the following and mark the correct options

Animal	Respiratory Organ
A. Earthworm	i. Moist cuticle
B. Aquatic Arthropods	ii. Gills
C. Fishes	iii. Lungs
D. Birds/Reptiles	iv. Trachea

A. A-ii, B-i, C-iv, D-iii

B. A-i, B-iv, C-ii, D-iii

C. A-i, B-iii, C-ii, D-iv

D. A-i, B-ii, C-iv, D-iii

Answer: b



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