

1. In anaerobic respiration

(A) glycolysis does not take place	(B) water molecule is split
(C) oxygen acts as a final electron acceptor	(D) ethyl alcohol is the common end product
2. Maximum rate of respiration takes place at

(A) $0^{\circ} - 10^{\circ}\text{C}$	(B) $35^{\circ} - 40^{\circ}\text{C}$	(C) $90^{\circ} - 100^{\circ}\text{C}$	(D) $50^{\circ} - 60^{\circ}\text{C}$
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3. Net gain of ATP molecules in the oxidation of one glucose molecule

(A) 40	(B) 38	(C) 32	(D) 34
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4. Anaerobic respiration is also termed as

(A) fermentation	(B) imbibition	(C) transportation	(D) all the above
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5. In plants the main respiratory substrate is

(A) proteins	(B) fats	(C) carbohydrates	(D) organic acids
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6. Energy rich compound produced in respiration is

(A) ATP	(B) ADP	(C) NAD	(D) none of the above
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7. The immediate source of energy for metabolic reactions in a living cell is

(A) glucose	(B) ADP	(C) NADP	(D) FAD
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8. Carbondioxide and water are formed in

(A) photosynthesis	(B) aerobic respiration	(C) combustion	(D) fermentation
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9. End product of glycolysis is

(A) lactic acid	(B) aspartic acid	(C) pyruvic acid	(D) acetyl-co A
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10. The reactions of Krebs cycle occur in

(A) lysosomes	(B) grana
(C) mitochondria	(D) endoplasmic reticulum
11. In respiration pyruvic acid is

(A) broken down into two carbon compound and carbondioxide	(B) formed only when oxygen is available
(C) one of the products of kreb's cycle	(D) a result of protein breakdown
12. In anaerobic respiration, pyruvic acid in the muscles form

(A) alcohol	(B) CO_2 and water	(C) lactic acid	(D) none of these
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13. The intermediate compound common for aerobic and anaerobic respiration is

(A) PGA	(B) acetic acid	(C) pyruvic acid	(D) all the above
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14. In glycolysis, ultimately

(A) proteins are converted into glucose	(B) glucose is converted into fructose
(C) fats are converted into glucose	(D) glucose is converted into pyruvic acid
15. Lactic acid accumulation leads to

(A) liver fatigue	(B) muscle fatigue	(C) kidney fatigue	(D) all the above
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16. Respiration is a/an _____ process

(A) anabolic	(B) catabolic	(C) metabolic	(D) none of the above
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17. Gaseous exchange in plants takes place through _____ and _____
 (A) stomata, lenticels (B) guard cells, grana
 (C) stroma, grana (D) none of the above
18. Lenticels are found in
 (A) the stem in which secondary growth has taken place
 (B) the root where secondary growth has occurred
 (C) the roots as well as the stem where secondary growth has occurred
 (D) none of the above
19. The common phase between aerobic and anaerobic respiration is called
 (A) tricarboxylic acid cycle (B) Krebs's cycle
 (C) glycolysis (D) none of the above
20. The process of respiration is concerned with
 (A) liberation of oxygen (B) liberation of carbondioxide
 (C) liberation of energy (D) intake of oxygen
21. Respiratory organs in cockroach are
 (A) blood vessels (B) mucous glands (C) gills (D) trachea
22. Respiration in amoeba occurs by
 (A) transpiration (B) osmosis (C) diffusion (D) inhalation
23. Cutaneous respiration occurs in
 (A) cockroach (B) salamander (C) crab (D) parrot
24. In grasshopper, the tracheal system opens to outside through
 (A) anus (B) mouth (C) dorsal pores (D) stigmata
25. Alveoli occur in
 (A) skin (B) trachea (C) gills (D) lungs
26. The structure that acts as a lid over glottis
 (A) tongue (B) gill lamella (C) epiglottis (D) operculum
27. The structure that plays a major role in respiratory movements
 (A) epiglottis (B) sinus venosus (C) monocyte (D) diapharam
28. Gills are for
 (A) terrestrial respiration (B) aquatic respiration
 (C) pulmonary respiration (D) all types of respiration
29. Larynx is the sound box found in
 (A) birds (B) man (C) frogs (D) lizards
30. Three lobed lung in man is
 (A) right lung (B) left lung (C) both (D) none
31. The correct sequence of anaerobic respiration in yeast is
 (A) $Glucose \xrightarrow{cytoplasm} Pyruvate \xrightarrow{mitochondria} Ethanol + Carbon\ dioxide$
 (B) $Glucose \xrightarrow{cytoplasm} Pyruvate \xrightarrow{cytoplasm} Lactic\ acid$
 (C) $Glucose \xrightarrow{cytoplasm} Pyruvate \xrightarrow{mitochondria} Lactic\ acid$
 (D) $Glucose \xrightarrow{cytoplasm} Pyruvate \xrightarrow{cytoplasm} Ethanol + Carbon\ dioxide$

32. Lack of oxygen in muscles often leads to cramps among cricketers. This results due to
 (A) Conversion of pyruvate of ethanol (B) Conversion of pyruvate to glucose
 (C) Non conversion of glucose to pyruvate (D) Conversion of pyruvate to lactic acid
33. Gas exchange in animals always involves:
 (A) Cellular respiration (B) Breathing movements
 (C) Active transport of gases (D) Diffusion across membranes
34. Which statement explains why fish spend a lot of energy removing oxygen from water?
 (A) They have to pump large volumes of water through their gills to keep their respiratory membranes moist
 (B) The CO_2 content of their tissues is much higher than that of terrestrial animals
 (C) Their gills are covered with protective plates which make it more difficult for them to process the oxygen from air.
 (D) They have to pump large volumes of water through their gills because of water's low oxygen content
35. In humans, the largest amount of the carbon dioxide produced by body cells is carried to the lungs as
 (A) CO_2 attached to haemoglobin in the red blood cells
 (B) Attached to haemoglobin circulating in the plasma
 (C) The bicarbonate ion attached to hemoglobin
 (D) The bicarbonate ion dissolved in the plasma
36. Lungs are covered by
 (A) Perichondrium (B) Pleural sac
 (C) Pericardium (D) Peristomium
37. Body tissues obtain O_2 from haemoglobin because of its dissociation in tissues caused by
 (A) Low oxygen concentration and high CO_2 concentration
 (B) High O_2 concentration
 (C) Low CO_2 concentration
 (D) High CO_2 concentration
38. Which is the correct sequence of air passage during inhalation?
 (A) *Nostrils* → *larynx* → *pharynx* → *trachea* → *lungs*
 (B) *Nassal passage* → *trachea* → *pharynx* → *larynx* → *alveoli*
 (C) *Larynx* → *nostrils* → *pharynx* → *lungs*
 (D) *Nostrils* → *pharynx* → *larynx* → *trachea* → *alveoli*
39. During inspiration muscles of diaphragm
 (A) Contracts (B) Expands (C) No effect (D) Coiled like string
40. Expiration involves
 (A) Relaxation of diaphragm and intercostal muscles
 (B) Contraction of diaphragm and intercostal muscles
 (C) Contraction of diaphragm muscles
 (D) Contraction of intercostal muscles

41. Which of the following does not happen during exhalation?
 (A) The space in chest cavity decreases (B) Diaphragm goes up
 (C) Air is released (D) Ribs are pushed upward and outward
42. Which of the following statement(s) is (are) true about respiration?
 a. During inhalation, ribs move inward diaphragm is raised
 b. in the alveoli, exchange of gases takes place i.e. oxygen from alveolar air diffuses into blood and carbon dioxide from blood into alveolar air
 c. Haemoglobin has greater affinity for carbon dioxide than oxygen
 d. Alveoli increase surface area for exchange of gases
 (A) a and b (B) b and c (C) a and c (D) b and d
43. Muscular partition present between thorax and abdomen is
 (A) Pericardium (B) Pleura (C) Epiglottis (D) Diaphragm
44. Most of the carbon dioxide is carried in the blood as
 (A) Bicarbonates (B) Carbon monoxide
 (C) Carbonic acid (D) Carbonates
45. If a man from sea coast goes to Everest peak then
 (A) His breathing rate and heart beat will increase
 (B) His breathing rate and heart beat will decrease
 (C) His respiratory rate will decrease
 (D) His heart beat will decrease
46. For each glucose molecule that is broken down in glycolysis there is a net gain of
 (A) 1 ATP molecule (B) 2 ATP molecules (C) 3 ATP molecules (D) 4 ATP molecules
47. The end product of fermentation of molasses by yeast is
 (A) pyruvate (B) methyl alcohol (C) ethyl alcohol (D) lactate
48. Most CO_2 from catabolism of glucose is released during
 (A) glycolysis (B) the krebs cycle (C) lactate fermentation (D) oxidative phosphorylation

KEY

1. D	2. B	3. B	4. A	5. C	6. A	7. A	8. B
9. C	10. C	11. A	12. C	13. C	14. D	15. B	16. B
17. A	18. A	19. C	20. C	21. D	22. C	23. B	24. D
25. D	26. C	27. D	28. B	29. B	30. A	31. D	32. D
33. D	34. D	35. D	36. B	37. A	38. D	39. A	40. A
41. D	42. D	43. D	44. A	45. A	46. B	47. C	48. B