LIFE PROCESS

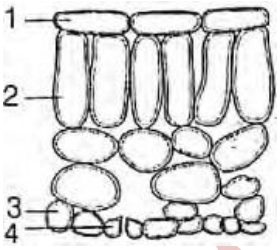
1. OBJECTIVE QUESTIONS

1 Vocal cords occur in:
(a) pharynx (b) glottis
(c) bronchial tube (d) larynx

2 What is the mode of nutrition in fungi?
(a) Autotrophic (b) Heterotrophic
(c) Saprophytic (d) Parasitic

3. How many pairs of salivary glands are found in humans?
(a) Two (b) Three
(c) Six (d) Four

4 The diagram shows the arrangement of cells inside the leaf of a green plant. (No cell contents are shown). Which cells normally contain chloroplasts?



(a) 1 and 2 (b) 1 and 4
(c) 2 and 3 (d) 2 and 4

5. In the cardiac cycle, diastole is:
(a) The number of heart beats per minute
(b) The relaxation period after contraction of the heart
(c) The forceful pumping action of the heart
(d) The contraction period after relaxation of the heart

6. Blood vessel carry blood from lungs to heart through:
(a) Pulmonary artery (b) Pulmonary vein
(c) Coronory artery (d) None of these

7. Which of the following structures is involved in gaseous exchange in woody stem of a plant?
(a) Stomata (b) Lenticel
(c) Guard cell (d) Epidermis

8. Which substances are produced by anaerobic respiration in yeast?

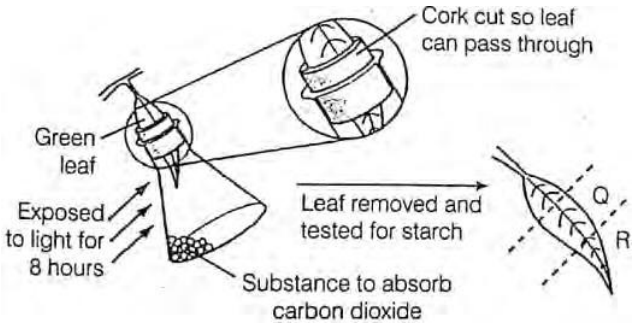
	Carbon dioxide	**Alcohol**	**Lactic Acid**	**Water**
(a)	{	{	#	#
(b)	{	#	{	#
(c)	#	{	#	{
(d)	#	#	{	{

Key { = produced, #= not produced.

9. Which cell organelle is involved in breakdown of glucose to produce energy for metabolic activities?
(a) Mitochondria (b) Chloroplast
(c) Endoplasmic reticulum (d) Golgi body

10. From which structure, the free oxygen gas produced during photosynthesis is released?
(a) Epidermis (b) Stomata
(c) Cortex (d) Guard cell

11. A plant is kept in the dark for two days. A leaf is used in an experiment to investigate the effect of two factors on photosynthesis as shown in the diagram.

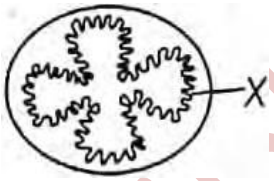


What are the colours of *Q* and *R* , when the leaf is tested for starch, using iodine solution?

	Q	*R*
(a)	Blue/black	Brown
(b)	Brown	Brown
(c)	Blue/black	Blue/black
(d)	Brown	Blue/black

12. Villi present on the internal wall of intestine help in the
(a) emulsification of fats
(b) breakdown of proteins
(c) absorption of digested food
(d) digestion of carbohydrates

13. The diagram represents a section through the small intestine.



What is the role of the structure labelled *X* ?
(a) They help to move the food along
(b) They make a large surface area for absorption
(c) They protect against bacteria
(d) They move mucus over the surface

14. Choose the forms in which most plants absorb nitrogen:
1. Proteins
2. Nitrates and nitrites
3. Urea
4. Atmospheric nitrogen

Choose the correct option.
(a) 1 and 2 (b) 2 and 3
(c) 3 and 4 (d) 1 and 4

15. Only two of the following Statements accurately describe what happens in the mouth.
1. Amylase breaks down large starch molecules into smaller maltose molecules.
2. Chewing increases the surface area of food for digestion.
3. Saliva emulsifies fats into smaller droplets.
4. Teeth breakup large insoluble molecules into

Which statements are correct?
(a) 1 and 2 (b) 2 and 3
(c) 3 and 4 (d) 1 and 4

16. When a person eats some egg white, proteins and water enter the stomach. Which substances are found leaving the stomach and leaving the small intestine?

	Leaving the Stomach	**Leaving the Small Intestine**
(a)	Amino acids and water	Amino acids and water
(b)	Fatty acids, glycerol and water	Fatty acids, glycerol and water
(c)	Protein and water	Fatty acids and glycerol
(d)	Protein, amino acids and water	Water

17. In photosynthesis, which substances are used up, which are produced and which are necessary, but remain unchanged after the reaction?

	Used up	**Produced**	**Remain Unchanged**
(a)	Carbon dioxide	Water	Oxygen
(b)	Chlorophyll	Carbon dioxide	Water
(c)	Oxygen	Starch	Cellulose
(d)	Water	Oxygen	Chlorophyll

15. What is the final product of photosynthesis?

1. Protein (b) Fat
(c) Starch (d) Mineral salt

16. During vigorous physical exercise, lactic acid is formed from glucose inside the muscle cells because

1. there is lack of oxygen
2. there is lack of water
3. there is excess of carbon dioxide
4. none of the above

17. The following changes take place in an athlete's body during a 100 m race. Which change occurs first?

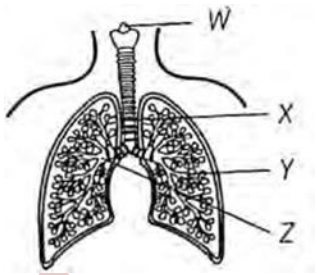
1. Increased availability of oxygen to muscles
2. Increased breathing rate
3. Increased carbon dioxide concentration in the blood
4. Increased production of carbon dioxide by muscles

18. Major function of contractile vacuole is:

1. Excretion (b) Circulation
(c) Osmoregulation (d) All the above

14. The diagram shows part of the human gas exchange system.

	Bronchus	**Bronchiole**	**Larynx**	**Trachea**
(a)	*W*	*X*	*Z*	*Y*
(b)	*X*	*Z*	*Y*	*W*
(c)	*Y*	*W*	*X*	*Z*
(d)	*Z*	*Y*	*W*	*X*



What are W, X,Y and Z ?

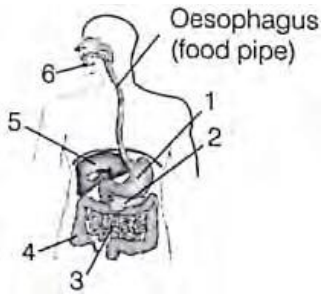
19. Instrument used to measure blood pressure is

1. barometer (b) potometer
(c) thermometer (d) sphygmomanometer

20. In which order do these events occur in human nutrition?

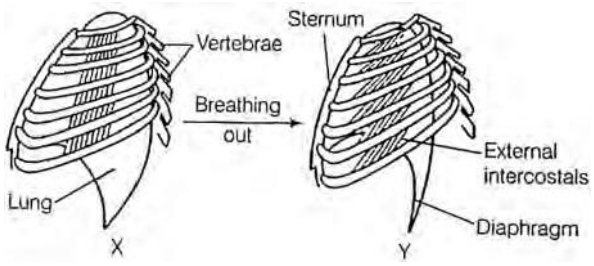
1. Digestion''ingestion''absorption''assimilation
2. Digestion''ingestion''assimilation''absorption
3. Ingestion''digestion''absorption''assimilation
4. Ingestion''digestion''assimilation''absorption

21. The diagram shows the human gut. Which numbered structures secrete digestive enzymes?



(a) 1, 2, 3 and 4 (b) 1, 2, 3 and 6
(c) 2, 3, 4 and 5 (d) 2, 3, 5 and 6

22. The diagram shows the ribs and some of the muscles used in breathing.



which muscles relax in moving from position *X* to position *Y* ?

	Diaphragm	External Intercostals
(a)	No	No
(b)	No	Yes
(c)	Yes	No
(d)	Yes	Yes

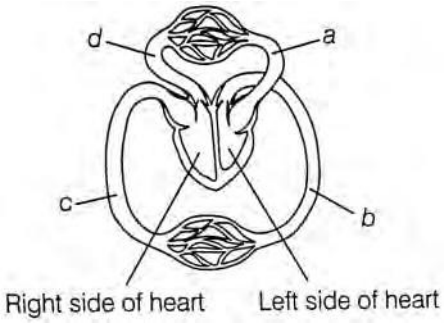
23. Which of the following is not a disorder of the circulatory system?

1. Atherosclerosis (b) Arteriosclerosis
(c) Arthritis (d) Angina

24. Which of the following is responsible for the transport of water and minerals from roots to aerial parts of the plant?

1. Xylem (b) Phloem
(c) Cortex (d) Both (a) and (b)

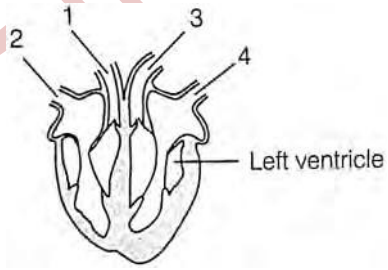
25. The diagram represents a part of human circulatory system. Where is the blood pressure highest?



26. Urea is formed in:

1. Liver (b) Spleen
(c) Kidney (d) Lungs

27. The diagram shows a vertical section through the heart.



28. what are the functions of the numbered blood vessels?

	Carries blood of body	Carries blood to lungs	Carries blood from lungs	Carries blood from body
(a)	1	2	3	4
(b)	1	3	4	2
(c)	2	4	3	1
(d)	3	1	4	2

29. What is the correct route for blood flow in a human?

1. Left atrium '' Left ventricle '' Lungs '' Right ventricle '' Right atrium
2. Left atrium '' Left ventricle '' Right ventricle '' Right atrium '' Lungs
3. Right atrium '' Right ventricle '' Left ventricle '' Left atrium '' Lungs
4. Right atrium '' Right ventricle '' Lungs '' Left atrium '' Left ventricle

30. What may happen if a young plant is dug up and re-planted in another place?

1. The leaves lose less water
2. The roots cannot take up mineral salts
3. The stem cannot transport water
4. The surface area of the root is reduced

31. Which of the following is not a purpose of transpiration?

1. Supplies water for photosynthesis
2. Helps in translocation of sugar in plants
3. Cools leaf surface
4. Transports minerals from the soil to all the parts of the plant

32. The table shows the characteristics of blood in one blood vessel of the body.

Oxygen concentration	Carbon dioxide concentration	Pressure
High	Low	High

which blood vessel contains blood with these characteristics?

(a)Aorta (b) Pulmonary artery

(c) Pulmonary vein (d) Vena cava

33. What are the functions of the Xylem?

	Carrying sygars	Carrying water	Carrying mineral ions	Giving support
(a)	{	#	#	{
(b)	{	{	#	#
(c)	#	{	{	#
(d)	#	{	{	{

Key { = a function of xylem, #= not a function of xylem

34. Excretion is carried out by nephridia in:

(a)cockroach (b) amoeba

(c) earthworm (d) human

35. Which chambers of human heart contain oxygenated blood?

1. Left atrium and left ventricle
2. Left atrium and right ventricle
3. Right atrium and left ventricle
4. Right atrium and right ventricle

36. The process of conversion of glucose into pyruvic acid occurs in

(a) mitochondria (b) cytoplasm

(c) outside the cell (d) chloroplast

37. Which process occurring in human body does not involve energy from respiration?

1. Contraction of heart muscle
2. Diffusion of oxygen from the alveoli into the blood
3. Digestion of bread
4. Maintaining a constant body temperature

38. The sites of exchange of wastes, nutrients, gases and hormones between the blood and body cells are the:

(a) arteries (b) arterioles

(b) Capillaries (d) Veins

39. The rate at which oxygen moves from the alveoli of our lungs into our blood:

1. depends on the difference in oxygen concentration between the alveoli and the blood.
2. depends on the color of the alveoli.
3. depends on the availability of energy to transport gases across the membrane.
4. none of the above

40. The function of the glomerulus and Bowman's capsule of the nephron is to:

1. reabsorb water into the blood
2. eliminate ammonia from the body
3. reabsorb salts and amino acids
4. filter the blood and capture the filtrate

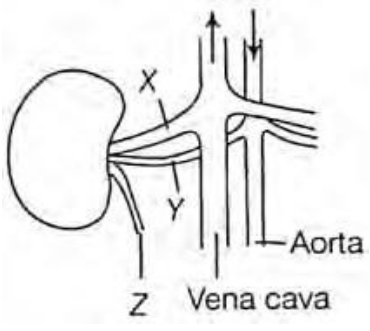
41. Structural and functional unit of kidney is

(a) renal pelvis (b) nephridia

(c) nephron (d) hilum

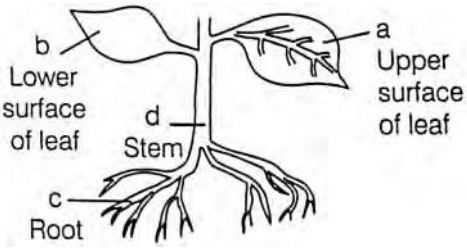
42. In the figure given alongside, the structures associated with human kidneys are marked (*X*,*Y* and *Z*). The relative concentrations of urea in these structures is

a) X is sometimes higher than Y
b) Y is always higher than Z
c) Y is always lower than Z
d) Z is sometimes lower than X



45. Choose the incorrect pair.
(a) Ultrafiltration-Glomerulus
(b) Concentration of urine-Collecting duct
(c) Transport of urine-Ureter
(d) Storage of urine-Urinary bladder

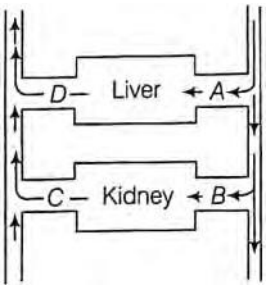
46. The diagram shows parts of a flowering plant. Where does the most transpiration take place?



47. The correct order of air reaching from atmosphere to the lungs is through:

(a) external nares, larynx, trachea and air sac
(b) laryx, trachea, air sac and external nares
(c) trachea, air sac, external nares and larynx
(d) air sac, trachea, larynx and external nares

49. The diagram given below represents the liver, kidney and some associated blood vessels. Identify the vessel from the labelled parts *A*-*D* in which the blood will contain the lowest concentration of urea.



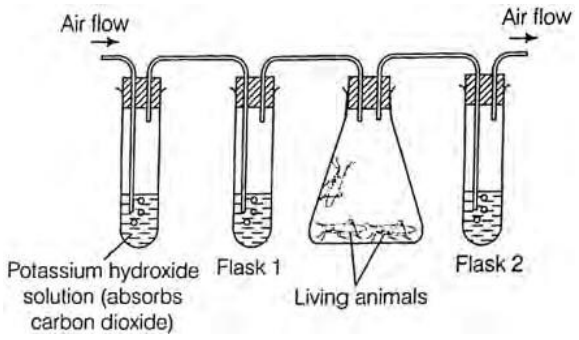
(a) *A*
(b) *B*
(c) *C*
(d) *D*

50. Proteins $\xrightarrow{A}$ Peptones
Identify the enzyme *A* involved in the above reaction.
(a) Salivary amylase
(b) Bile juice
(c) Pepsin
(d) Lipase

51. Digestion of food in human starts from:
(a) Duodenum (b) Small intestine
(c) Mouth (d) Large intestine

52. Which one indicates hypertension or high Blood Pressure (BP)?
(a) 120/80 (b) 110/70
(c) 130/80 (d) 140/90

53. An experiment is set up as shown. Flasks 1 and 2 contain lime water. Air is pumped through the flasks.



What is the appearance of lime water in flasks 1 and 2 after a period of ten minutes?

	Flask 1	Flask 2
(a)	Clear	Clear
(b)	Clear	White/Cloudy
(c)	White/Cloudy	Clear
(d)	White/Cloudy	White/Cloudy

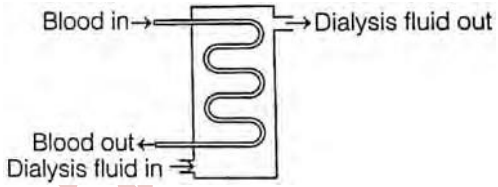
54. Flame cells are the excretory structures in
(a) arthropods (b) platyhelminths
(c) anneelids (d) crustaceans

55. Dialysing unit (artificial kidney) contains a fluid which is almost same as plasma except that is has
(a) high glucose (b) high urea
(c) no urea (d) high uric acid

56. The movement of water and dissolved minerals from the roots of the leaves is best explained by:
(a) Cohesion-tension theory
(b) Translocation
(c) Tensile strength
(d) Pressure-flow hypothesis

57. Which of the following is not a component of plasma?
(a) water (b) globulins
(c) fibrinogen (d) platelets

58. Figure given below is representing the dialysis machine for removing nitrogenous wastes in patient with a kidney failure.



which substances out of the following in the dialysis fluid should be at a lower concentration than in the blood of patient?
(a) Glucose and urea
(b) Glucose and amino acids
(c) Salts and urea
(d) Glucose and salts

59. Veins can be differentiated from arteries because the veins:
(a) have valves (b) have hard walls
(c) have pure blood in them (d) have thick walls

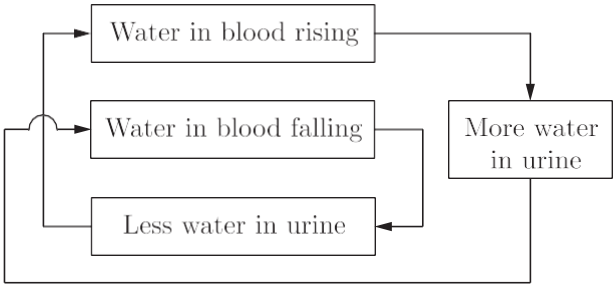
60. Most often during a kidney disorder, the colour of urine changes from yellow to others. A patient is secreting dark colured urine which turns to blue or black later. This is due to the presence of which of the following?
(a) Homogentisic acid (b) Methaemoglobin
(c) Coproporphyrin (d) Both (a) and (b)

61. Main excretory organ of humans is
(a) kidney (b) lungs
(c) skin (d) liver

62. Which of the following is used in manufacturing of varnishes, glazing agents, etc?
(a) Tannin (b) Resins
(c) Essential oil (d) Rubber

63. In amoeba the digestion is intracellular because:
(a) Amoeba is unicellular
(b) Amoeba is multicellular
(c) Amoeba is found in a pond
(d) Amoeba is a microscopic animal

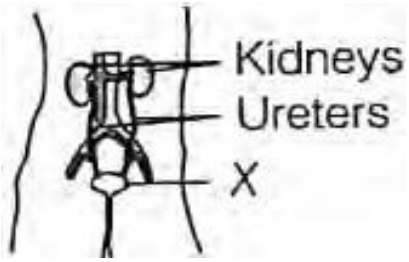
64. Observe the figure given below which represents the control of water concentration in the blood.



This is negative feedback system because
(a) It decreases the amount of water in the blood
(b) It increases any change occurring in the amount of water in the blood
(c) It reverses any change occurring in the amount of water in the blood
(d) It increases the amount of water in the blood

65. What is the term used when vessels open and let more blood through?
(a) Vasoconstriction (b) Vasodilatation
(c) Increased permeability (d) None of these

66. The diagram given alongside shows the human excretory system. Identify the function of part labelled as *X*.



(a) To excrete urea (b) To produce urea
(c) To produce urine (d) To store urine

67. Example(s) of liquid waste product in plants is/are
(a) rubber (b) clove oil
(c) gum (d) All of these

68. A healthy woman consumes a litre of water at once.
1. How will be the internal environment of her body affected by this?
2. A corrective measure to bring the arising condition to normal state is.

Select the correct option for (i) and (ii) from those given below:

	(i)	(ii)
(a)	Plasma becomes diluted	Concentration of the urine formed.
(b)	Osmotic pressure of the plasma decreases	Increase in the volume of urine formed.
(c)	The body cells undergo shrinkage	Less water is reabsorbed by the kidneys.
(d)	Osmotic pressure of the plama increases	Formation of dilute urine occurs.

69. The breakdown of pyruvate to give carbon-di-oxide, water and energy takes place in:
(a) cytoplasm (b) mitochondria
(c) chloroplast (d) nucleus

70. Digestion of starch starts from:
(a) Stomach (b) Intestine
(c) Oesophagus (d) Mouth

71. The process of transpiration in plants helps in:
(a) Opening of stomata
(b) Absorption of CO_2 from atmosphere
(c) Upward conduction of water and minerals
(d) Absorption of O_2 from atmosphere

72. Root cap has no role in water absorption because:
(a) It has no direct connection with the vascular system
(b) It has no cells containing chloroplasts
(c) It has no root hairs
(d) It has loosely arranged cells.

73. Which substances will be present in the glomerular filtrate from the kidneys of a mammal?

	Glucose	Protein	Salts
(a)	{	{	#
(b)	#	{	{
(c)	{	#	{
(d)	#	#	{

Key { = present, #= absent

2. FILL IN THE BLANK

1. In human, the right lung is.....lobed.

2. Carbonic anchydrase regulates the formation of .....

3. Principal waste product of metabolism in humans is .....

4. ..... valve separates the left atrium from the left ventricle.

5. Energy rich compound generated during photosynthesis is ..... .

6. Ninety percent of the water lost by the plants during transpiration is through the ..... of the leaf.

7. Blood circulation in humans is called.....circulation.

8. Pressure in the arteries during ventricular relaxation is called.....pressure.

9. --------are regarded as complete photosynthetic units of plants.

10. Starch changes blue in.....solution.

11. ..... are the lymphatic capillaries arising from the small intestine.

12. ------are fat soluble vitamins.

13. Two.....are present on both sides of the stomata.

14. Largest digestive gland in the human body is ..... .

15. The structural and functional units of lungs is ..... .

16. The ..... prevents the entry of food into the respiratory tract.

17. --------(of bile juice) help in emulsification of fats.

18. In ....., waste is removed by diffusion.

19. Synthesis of ATP using light energy in photosynthesis is ..... .

20. Diffusion is insufficient to meet ..... requirement of multicellular organisms like humans.

21. ..... node is present near the opening of superior and inferior vena cavae.

22. A plant pigment known as ..... is involved in the phenomenon of photoperiodism.

23. Man is.....in nutrition.

24. ..... involves the intake of complex material prepared by other organisms.

25. Contraction of heart is known as .....

26. The major function of the ..... blood cells is to transport oxygen.

27. The semiliquid mixture of partially digested food found in the stomach is called ..... .

28. The functional unit of the mammalian kidney is the ..... .

29. are the solid bodies in fruits in which waste is stored.

30. ..... veins pour their ..... blood into left atrium.

31. Glomerulus occurs in ..... capsule.

32. Kidney eliminate the excretory waste materials as their aqueous solution, called ..... .

33. secretes bile and cholesterol.

34. movements occur along the gut.

35. Second heart sound heard as ..... is due to closure of ..... valves at the beginning of ventricular diastole.

36. The thin double-walled sac enclosing the heart is called .....

37. Rings of ..... present in trachea, bronchi and bronchioles prevent their collapse when air is not passing through them.

TRUE / FALSE

1. Fermentation is a form of aerobic respiration.

2. The lacteals contain absorbed carbohydrates.

3. Teeth are the only part of the digestive system that physically breaks down food.

4. The loss of water by a plant is called transpiration.

5. Blood is not a tissue because it is a fluid.
6. Bowman's capsule is found in heart.
7. Arteries are the widest blood vessels.

8. Birds and mammals have tow-chambered heart.
9. Grass-eating animals need a longer small intestine to allow the cellulose to be digested.

10. Only animals have tissues.
11. Some organs are used in more than one system.

12. Fishes respire through skin.

13. Translocation is the transportation of the products of photosynthesis.

14. Essential amino acids cannot be synthesized in human body.

15. Stretching of inner wall of guard cells, open the stomata.

16. The systems in an organism work independently.

17. Veins are thick walled.

18. Respiration is the only source of energy for all organisms.

19. Carbon-di-oxide cannot be transported with haemoglobin.

20. In a general sense, digestion is simply hydrolysis of complex polymers to monomers.

21. Leucocytes play an important role in blood coagulation.

22. Circulatory system also performs the function of homeostasis.

23. In humans, protein digestion is completed in the mouth.

24. Only the multicellular organisms require transporting mechanisms.

25. External respiration may be called breathing.

26. The exchange of nutrients and waste products between the blood and cells occurs within the arteries.

27. In humans, the alveoli are the functioning units of external respiration.

28. Trypsin digests proteins into amino acids.

29. Living organisms must maintain a constant internal environment.

30. Deficiency of folic acid causes scurvy.

31. A complete digestive tract consists of an oral and an anal opening.

32. Stomata are tiny pores present on the surface of leaves.

33. The liquid portion of the blood is called plasma.

34. Generally gravitational water is utilized by the plants.

35. Humans have an open circulatory system.

36. In photosynthesis, carbon-di-oxide is given out by diffusion process.

4. MATCHING QUESTIONS

DIRECTION : Each question contains statements given in two columns which have to be matched. Statements (A, B, C, D) in column I have to be matched with statements (p, q, r, s) in column II.

1.

Column I		Column II	
(A)	Nutrition	(p)	The increase in cell size and/or number
(B)	Synthesis	(q)	The movement of materials within the cell or within the organism.
(C)	Growth	(r)	The process of obtaining food
(D)	Transport	(s)	Combining small molecules to create larger more complex molecules.

2.

Column I		Column II	
(A)	Regulation	(p)	The removal of metabolic waste from an organism
(B)	Reproduction	(q)	The chemical process of oxidizing organic molecules to release energy.
(C)	Respiration	(r)	Their replication of an organism
(D)	Excretion	(s)	The control and coordination of chemical processes within the organism

3.

(A)	Stomach	(p)	The structure is the site where the chemical breakdown of proteins first occurs.
(B)	Large intestine	(q)	This organ absorbs most of the water from the undigested food.
(C)	Small intestine	(r)	This organ is the section of the alimentary canal where most of the food is absorbed into the blood.
(D)	Excretion	(s)	This organ secretes the chemical bile, which is used to emulsify fats.

4.

Column I		Column II	
(A)	Pancreas	(p)	This organ secretes the chemical enzymes amylase, protease and lipase.
(B)	Rectum	(q)	This is a storage site for faces before being egested from the body.
(C)	Oesophagus	(r)	This tube structure transports food from the oral cavity to the stomach.
(D)	Oral cavity	(s)	The structure where mechanical digestion of food first occurs.

5.

Column I (Animal)		Column II (Respiratory Organ)	
(A)	Fish	(p)	Trachea
(B)	Birds	(q)	Gills
(C)	Aquatic	(r)	Lungs
(D)	Earthworm	(s)	Moist cuticle

6.

Column I (Region of digestive system)		Column II (Digestive Organ)	
(A)	Mouth	(p)	Pancreatic juice
(B)	Stomach	(q)	Intestinal juice
(C)	Duodenum	(r)	Gastric juice
(D)	Small intestine	(s)	Saliva

7.

Column I		Column II	
(A)	Autotrophic	(p)	Leech
(B)	Hetetrophic nutrition	(q)	Paramaecium
(C)	Parasitic nutritrion	(r)	Deer
(D)	Digestion in food vaculoes	(s)	Green plant

8.

	Column I		Column II
(A)	Phloem	(p)	Excretion
(B)	Nephron	(q)	Translocation of food
(C)	Veins	(r)	Clotting of blood
(D)	Platelets	(s)	Deoxygenated blood

5. ASSERTION AND REASON

DIRECTION : The following question consist of two statements - Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.
(e) Both Assertion and Reason are false.

1 **Assertion :** in the daytime, CO_2 generated during respiration is used up for photosynthesis.
Reason : There is no CO_2 release during day.

2 **Assertion :** Raw materials needed for photosynthesis are carbon dioxide, water and minerals.
Reason : Nutrients provide energy to an organism.

3 **Assertion :** Lungs always contain a residual volume of air.
Reason : It provides sufficient time for oxygen to be absorbed and for carbon dioxide to be released.

4 **Assertion :** Transpiration is a necessary evil.
Reason : It causes water loss but helps in absorption and upward movement of water and minerals.

5 **Assertion :** Translocation of sugar occurs through the phloem.
Reason : It is achieved by diffusion of sugars through phloem.

6 **Assertion :** Digestion breaks large complex molecules to simple smaller molecules which can be easily absorbed.
Reason : Digestion is necessary for the absorption of all molecules.

7 **Assertion :** Energy is used during the process of respiration.
Reason : Respiration stores energy in the form of ATP.

8 **Assertion :** During physiology of excretion, deamination does not take place in liver.
Reason : Deamination is a process to make use of excess of amino acids which cannot be incorporated into protoplasm.

9 **Assertion :** Egestion is the removal of nitrogenous waste products from the body.
Reason : Excretion is the discharge of undigested matter from the digestive tract.

10 **Assertion :** The muscular walls of ventricles are thicker than auricles.
Reason : This helps in preventing the back flow of blood.

11 **Assertion :** In human heart, there is no mixing of oxygenated and deoxygenated blood.
Reason : Valves are present in the heart which allows the movement of blood in one direction only.

12 **Assertion :** In woody plants, gaseous exchange occurs through lenticels.
Reason : Lenticels are specialised cells found along with stomata on the stem of woody plants.

13 **Assertion :** Excretory unit of kidney is nephrons.
Reason : It has no role in secretion of urine.

14. **Assertion :** Muscles of stomach wall possess thick layers of muscles.
Reason : These muscles help in mixing the food with the enzymes presents in the alimentary canal.

15. **Assertion :** Artificial kidney is a device used to remove nitrogenous waste products from the blood through dialysis.
Reason : Reabsorption does not occur in artificial kidney.

16. **Assertion :** Respiration is a biochemical process opposite to photosynthesis.
Reason : Energy is released during respiration.

17. **Assertion :** The release of energy in aerobic process is much more than in anaerobic process.
Reason : Each glucose molecule produces 2 molecules of ATP and 38 molecules of ATP in aerobic and anaerobic respiration, respectively.

18. **Assertion :** In plants there is no need of specialised respiratory organs.
Reason : Plants do not have great demands of gaseous exchange.

19. **Assertion :** Plants have low energy needs.
Reason : Plant bodies have large proportion of dead cells.

20. **Assertion :** Walls of the intestine has numerous villi.
Reason : These villi increase the surface area of digestion.

21. **Assertion :** Mitochondria help in photosynthesis.
Reason : Mitochondria have enzymes for dark reaction.

22. **Assertion :** Blood pressure is arterial blood pressure.
Reason : It is measured by sphygmomanometer.

23. **Assertion :** Lymph, also known as tissue fluid is colourless.
Reason : It lackes erythrocytes.

24. **Assertion :** The main organ of human excretory system is kidney.
Reason : Kidneys perform the function of removing excess water and nitrogenous wastes from the body.

25. **Assertion :** Lipases help in emulsification of fats.
Reason : Lipases hydrolyses fats and oils.

26. **Assertion :** Humans are not truly aerobic.
Reason : They produce lactic acid anaerobically.

27. **Assertion :** Photorespiration decreases net photosynthesis.
Reason : Rate of respiration in dark and light is almost same in all plants.

28. **Assertion :** HCl converts pepsinogen into active enzyme pepsin.
Reason : Pepsin converts protein into proteoses and peptones.

29. **Assertion :** Autotrophic nutrition occurs in green plants.
Reason : Green plants self-manufacture their
Ans : (a) Both A and R are true and R is the correct explanation of A.

30. **Assertion :** Haemoglobin is the respiratory pigment in human beings.
Reason : It transports oxygen in the human body.

31. **Assertion :** Interauricular septum separates left from right atrium.
Reason : Interventricular septum separates left from right ventricle.

32. **Assertion :** Blood of insects is colourless.
Reason : The blood of insect does not play any role in transport of oxygen.

33. **Assertion :** All the arteries carry oxygenated blood from the heart to various organs.
Reason : Pulmonary vein carries deoxygenated blood to the heart.

34. **Assertion :** Human body produces highly toxic substances, which if not eliminated may cause the death.
Reason : Excretory substance removes nitrogenous waste from the body.

35. **Assertion :** Amoeba is an omnivore organism.
Reason : Lion is a carnivore organism.

36. **Assertion :** Liver is known as the smallest gland of the body.
Reason : It secretes salivary amylase.

37. **Assertion :** Carbohydrate digestion mainly takes place in small intestine.
Reason : Pancreatic juice contains the enzyme lactase.

38. **Assertion :** Valves are present in the arteries.
Reason : Arteries carry oxygenated blood from heart to different body parts except pulmonary artery.

39. **Assertion :** Plants lack excretory organs.
Reason : Plants usually absorb essential nutrients.

40. **Assertion :** Haemodialysis can save the life of patients with kidney failure.
Reason : Waste products like urea can be removed from the blood by haemodialysis.

41. **Assertion :** In humans, major amount of water is absorbed by the tubular part of nephron.
Reason : Absorption of water depends on the dissolved waste to be excreted from the body.

42. **Assertion :** Photosynthesis is an anabolic process.
Reason : The process of photosynthesis occurs in chlorophyll.

43. **Assertion :** In humans, there is a complex respiratory system.
Reason : Human skin is impermeable to gases.

44. **Assertion :** Alveoli contain an extensive network of blood vessels.
Reason : Alveoli is the site where exchange of gases occurs.

45. **Assertion :** Excretion is the biological process by which harmful wastes are removed from an organism's body.
Reason : The mode of excretion is completely same in both unicellular and multicellular organisms.

46. **Assertion :** Plants excrete various waste products during their life processes.
Reason : They produce urea just like humans.

47. **Assertion :** In anaerobic respiration, one of the end product is alcohol.
Reason : There is an incomplete breakdown of glucose.

48. **Assertion :** Bile is essential for digestion of lipids.
Reason : Bile juice contains enzymes.