CBSE Living Science Biology 10

Multiple-Choice Questions

(QUESTION BANK)

CHAPTER 1: LIFE PROCESSES – UNIT I: NUTRITION

Pick the correct option:

1. Which of these is not required for photosynthesis?
   a. Water b. Oxygen c. Sunlight d. Carbon dioxide
2. The mode of nutrition in *Cuscuta* is
   a. saprophytic. b. parasitic. c. holozoic. d. autotrophic.
3. *Paramecium* captures food with the help of
   a. tentacles. b. cilia. c. teeth. d. pseudopodia.
4. Which raw material is responsible for release of molecular oxygen during photosynthesis?
   a. Carbon dioxide b. Glucose c. Water d. Chlorophyll
5. The cellular energy reserve in heterotrophs is
   a. glycogen. b. starch. c. fatty acid. d. protein.
6. The largest gland associated with human alimentary canal is
   a. adrenal gland. b. pancreas. c. salivary gland. d. liver.
7. Which of the following is mainly digested in stomach?
   a. Carbohydrate b. Protein c. Lipids d. Both (a) and (b)
8. The process by which digested food passes through the intestinal wall into blood stream is known as
   a. assimilation. b. absorption. c. egestion. d. excretion.
9. Amoeba ingests food by the process of
   a. dialysis. b. cytokinesis. c. phagocytosis. d. amoebiasis.
10. While carrying the starch test on leaf, it is essential to boil the leaf in a water bath with alcohol to
    a. remove chlorophyll from the leaves. b. remove starch from the leaf.
    c. make the cell more permeable to iodine. d. stop all chemical reactions in the cell.
11. In stomach, hydrochloric acid creates an acidic medium so that
    a. enzyme trypsin digests the protein. b. enzyme pepsin digests the starch.
    c. enzyme pepsin digests the protein. d. enzyme trypsin digests the starch.
12. Which of the following enzymes is present in bile?
    a. Lipase b. Trypsin c. Pepsin d. None of these
13. In humans the process of digestion begins in the
    a. mouth. b. pharynx. c. stomach. d. small intestine.

14. Large intestine in man carries out
    a. absorption. b. assimilation. c. digestion of fat. d. digestion of protein.

15. The light reaction of photosynthesis takes place in the
    a. stroma of chloroplast. b. grana of chloroplast. c. matrix of mitochondria. d. cytoplasm of leaf cell.

16. What are the end products of light reaction of photosynthesis?
    a. Glucose and ATP b. Glucose and oxygen c. ATP, NADPH and O_2 d. ATP, H_2 and O_2

17. The inner lining of stomach is protected from harmful effect of hydrochloric acid by one of the following.
    a. Mucus b. Pepsin c. Trypsin d. Bile

18. Which of the following component of our food is digested by an enzyme which is present in saliva as well as in pancreatic juice?
    a. Lipid b. Protein c. Carbohydrate d. Fat

19. The opening and closing of stomatal pores depends upon
    a. temperature. b. concentration of carbon dioxide in guard cell.
    c. concentration of oxygen in guard cell. d. change in turgidity of the guard cell.

20. The first enzyme to mix with food in the digestive tract is
    a. pepsin. b. trypsin. c. amylase. d. lipase.

21. Which of the following does not occur in photosynthesis?
    a. Conversion of light energy to chemical energy b. Oxidation of carbon dioxide to glucose
    c. Photolysis of water d. Absorption of light energy by chlorophyll

22. In which of the following groups of organisms, the food is broken down outside the body and then absorbed?
    a. Yeast, Blue green algae, Mushroom b. *Amoeba*, *Paramecium*, *Euglena*
    c. *Cuscuta*, Mushroom, *Rhizopus* d. Yeast, Mushroom, *Rhizopus*

23. Emulsification of fat is done by
    a. pepsin enzyme. b. pancreatic lipase. c. intestinal lipase. d. bile juice.

24. The longest part of alimentary canal is
    a. large intestine. b. small intestine. c. oesophagus. d. stomach.

25. Pancreatic juice contains enzymes which digest
    a. carbohydrate and protein. b. crbohydrate and lipid.
    c. lipid and protein. d. carbohydrate, lipid and protein.

26. In which form do plants absorb nitrogen?
    a. Atmospheric nitrogen b. Urea c. Nitrites and nitrates d. Uric acid

27. The exit of faecal matter from our body is regulated by
    a. anal sphincter. b. rectum. c. colon. d. caecum.

28. Which type of medium is required for proper functioning of pancreatic juice?
    a. Acidic b. Alkaline c. Neutral d. Both (a) and (c)

29. In *Amoeba*, digestion of food takes place in
    a. food vacuole. b. cytoplasm. c. contractile vacuole. d. mitochondria.

30. Which of the following enzyme requires acidic medium?
    a. Salivary amylase b. Pancreatic lipase c. Pepsin d. Trypsin

UNIT II: RESPIRATION

Pick the correct option:

1. Gaseous exchange in fish takes place through
   a. skin. b. tracheae. c. gills. d. lungs.

2. Aerobic respiration takes place in the
   a. cytoplasm. b. mitochondria. c. vacuole. d. nucleus.

3. The end products of fermentation of glucose by yeast are
   a. ethanol, CO_2 and 36 ATP.
   b. CO_2, H_2O and 36 ATP.
   c. ethanol, CO_2 and 2ATP.
   d. lactic acid, CO_2 and 2 ATP.

4. The passage of air during inhalation is
   a. pharynx → nasal cavity → larynx → trachea → bronchi → bronchioles.
   b. nasal cavity → pharynx → larynx → trachea → bronchi → bronchioles.
   c. larynx → nasal cavity → pharynx → trachea → bronchioles → alveoli.
   d. larynx → pharynx → trachea → alveoli → bronchioles.

5. Exchange of gases in woody stem occurs through
   a. stomata. b. lenticels. c. cork. d. epidermis.

6. Pyruvic acid is converted to lactic acid in the _____ of muscle cells.
   a. cytoplasm b. mitochondria c. Golgi body d. none of these

7. The energy rich compound produced during respiration is
   a. AMP. b. ADP. c. ATP. d. pyruvate.

8. The common stage between aerobic and anaerobic respiration is
   a. reduction. b. glycolysis. c. Kreb's cycle. d. oxidation.

9. Which of the following prevents the collapse of air passage?
   a. Diaphragm b. Rings of cartilage c. Larynx d. Alveoli

10. Which of the following is not a characteristic of respiratory organ?
    a. Large surface area
    b. Richly supplied with blood capillaries
    c. Thick and dry surface
    d. Thin and delicate surface

11. Glottis opens on the floor of
    a. pharynx. b. trachea. c. diaphragm. d. oesophagus.

12. The biochemical compound that readily combines with oxygen and distributes it throughout the human body is
    a. urea. b. blood plasma. c. haemoglobin. d. insulin.

13. Residual volume of air in lungs
    a. helps in inhalation.
    b. allows continuous gaseous exchange between breathing.
    c. helps in exhalation.
    d. depletes oxygen from lungs.

14. Which of the following is not a correct statement regarding trachea?
    a. It splits into right and left bronchi to supply air to lungs
    b. Tracheal rings are C shaped
    c. Opening of trachea is covered with epiglottis
    d. It lies posterior to the oesophagus

15. Which of the following is correct regarding exhalation?
    a. Diaphragm is relaxed
    b. Rib cage lifts up
    c. Volume of thoracic cavity increases
    d. Pressure on the lung decreases

16. Which of these are anaerobes?
    a. Yeast, *Amoeba*
    b. Yeast, bacteria
    c. Yeast, algae
    d. Yeast, blue green algae

17. The direction of diffusion of gases in plants depends upon
    a. environmental conditions.
    b. requirement of the plants.
    c. both (a) and (b).
    d. none of these.

18. The rate of breathing is likely to be higher in
    a. mango tree.
    b. pigeon.
    c. fish.
    d. man.

19. The end product of glycolysis is
    a. lactic acid.
    b. glucose.
    c. ethanol.
    d. pyruvate.

20. Exchange of gases during respiration takes place at
    a. alveoli.
    b. bronchi.
    c. trachea.
    d. nostril.

21. Painful contraction of muscles during heavy physical exercise occur due accumulation of
    a) lactose.
    b. ethanol.
    c. pyruvic acid.
    d. lactic acid.

22. Which of the statements are true for respiration?
    i. Ribs move inwards and diaphragm is raised during inhalation
    ii. Gaseous exchange occurs at alveoli of lungs
    iii. Haemoglobin has greater affinity for carbon dioxide than oxygen
    iv. Alveoli increases surface area for exchange of gases
    a. i. and iv.
    b. ii. and iii.
    c. i. and iii.
    d. ii. and iv.

23. When air is blown from mouth into a test tube, lime water turns milky due to formation of
    a. calcium chloride.
    b. calcium carbonate.
    c. calcium bicarbonate.
    d. calcium hydroxide.

24. Site of glycolysis in cell is
    a. mitochondria.
    b. Golgi body.
    c. cytoplasm.
    d. endoplasmic reticulum.

25. In which of following organisms, simple diffusion of gases for breathing and respiration does not occur?
    a. *Amoeba*
    b. Cockroach
    c. *Paramecium*
    d. *Bryophyllum*

UNIT III: TRANSPORTATION

Pick the correct option:

1. Transport through which of the following is bidirectional?
   a. Xylem b. Phloem c. Cambium d. Both (a) and (b)
2. Which of the following is not an element of phloem?
   a. Sieve tube b. Tracheids c. Companion cell d. Parenchyma
3. Nucleus is absent in
   a. RBC. b. sieve tube. c. companion cell. d. both (a) and (b).
4. The process of transport of food from leaves to other parts of the plant is known as
   a. transportation. b. transpiration. c. translocation. d. transformation.
5. Valves are absent in
   a. capillaries. b. veins. c. arteries. d. both (a) and (c).
6. Instrument used to measure blood pressure is
   a. manometer. b. barometer. c. sphygmomanometer. d. stethoscope.
7. Normal systolic to diastolic blood pressure is
   a. 120/80 mm of mercury. b. 120/180 mm of mercury.
   c. 80/120 mm of mercury. d. 180/120 mm of mercury.
8. Oxygenated blood reaches heart through
   a. pulmonary vein. b. pulmonary artery. c. vena cava. d. aorta.
9. The exchange of material between blood and surrounding cells occur at
   a. heart. b. veins. c. arteries. d. capillaries.
10. Which of the following is not true for plants?
    a. Slow transport system b. High energy needs
    c. Not mobile d. Large number of dead cells
11. Which of the following is responsible for transport of water in herbaceous plants?
    a. Transpiration pull b. Root pressure c. Capillary force d. All of these
12. The blood vessel which carries deoxygenated blood to lungs is
    a. pulmonary artery. b. pulmonary vein. c. aorta. d. vena cava.
13. Which of the following has three chambered heart?
    a. Sparrow b. Fish c. Crocodile d. Frog
14. Which of the following statements are not true regarding translocation in plants?
    i. It transports food in the form of sugar
    ii. It requires energy in the form of ATP
    iii. It transports food in the form of glucose
    iv. It is a passive process
    a. i. and iv.
    b. ii. and iv.
    c. i. and ii.
    d. iii. and iv.

15. Which chamber of the heart receives oxygenated blood from pulmonary vein?
    a. Right atrium b. Left atrium c. Right ventricle d. Left ventricle

16. The main function of lymph is to
    a. transport digested fat.
    b. return extracellular fluid back to blood.
    c. destroy bacteria and foreign particles.
    d. all of these.

17. Four chambered heart
    a. prevents mixing of oxygenated and deoxygenated blood.
    b. allows mixing of oxygenated and deoxygenated blood.
    c. is found in cold blooded animals.
    d. none of these.

18. Deoxygenated blood is pumped to all parts of the body in
    a. frog. b. pigeon. c. fish. d. man.

19. Single blood circulation is seen in
    a. shark. b. whale. c. bat. d. frog.

20. Heart is protected by a double layered protective covering called
    a. pleura. b. pericardium. c. meninges. d. thorax.

21. Thrombocyte helps to
    a. transport oxygen. b. fight infection. c. clot blood. d. none of these.

22. Which of the following statements are true for human heart?
    i. Walls of ventricle are thicker than walls of atrium
    ii. Left atrium receives oxygenated blood through pulmonary vein
    iii. Right ventricle receives deoxygenated blood through vena cava
    iv. Right atrium receives oxygenated blood through vena cava
    a. i. and ii.
    b. ii. and iii.
    c. i. and iv.
    d. ii. and iv.

23. Transpiration helps in
    a. translocation. b. transport of water. c. photosynthesis. d. root pressure.

24. Walls of arteries are
    a. thick and elastic. b. thin and permeable. c. thick and inelastic. d. thin and impermeable.

25. The blood leaving the tissues become richer in
    a. oxygen. b. haemoglobin. c. carbon dioxide. d. urea.

UNIT IV: EXCRETION

Pick the correct option:

1. The basic functional unit of kidney is
   a. nephron. b. neuron. c. nephridia. d. cilia.
2. Bunch of capillaries in the Bowman's capsule is
   a. nephric capillaries. b. Glisson's capsule. c. glomerulus. d. Malpighian capsule.
3. Which blood vessel contains less nitrogenous waste?
   a. Renal artery b. Renal capillaries c. Renal vein d. Renal arteriole
4. The process of removing nitrogenous waste from the blood of a person is known as
   a. hydrolysis. b. haemolysis. c. haemodialysis. d. electrolysis.
5. Which of the following is reabsorbed in the blood during urine formation?
   a. Water b. Glucose c. Amino acid d. All of these
6. Which one of the following is not a part of nephron?
   a. Nephric tubule b. Ureter c. Bowman's capsule d. Both (a) and (c)
7. *Amoeba* excretes through
   a. contractile vacuole. b. food vacuole. c. nephridia. d. kidney.
8. The function of kidney is
   a. excretion. b. osmoregulation. c. both (a) and (b). d. none of these.
9. The waste material in plants is
   a. carbon dioxide. b. oxygen. c. resins and gums. d. all of these.
10. Plants excrete waste materials through
    a. old xylem. b. old leaves. c. stomata and lenticels. d. all of these.
11. The human kidney excretes nitrogenous waste majorly in the form of
    a. ammonia. b. amino acid. c. uric acid. d. urea.
12. The dialysing solution lack
    a. glucose. b. water. c. urea. d. salts.
13. Plant cell store waste in the
    a. vacuole. b. cytoplasm. c. lysosome. d. chloroplast.
14. The nephrons discharge their content in the
    a. ureter. b. urinary bladder. c. collecting duct. d. Bowman's capsule.
15. Urinary bladder is under _____ control.
    a. endocrine b. nervous c. hormonal d. all of these
16. Which of the following acts as dialysis bag in human kidney?
    a. Nephric tubule b. Glomerulus c. Collecting duct d. Urinary bladder
17. The amount of water reabsorbed from nephric tubule depends upon
    a. the amount of soluble waste to be removed from blood.
    b. the amount of water present in blood.
    c. the length of the nephron.
    d. both (a) and (b).

18. Which of the following statements regarding human kidney are incorrect?
    i. Kidney is bean shaped.
    ii. It has 1000 nephrons.
    iii. Right kidney is slightly lower than left kidney.
    iv. Left kidney is slightly lower than right kidney.
    a. i. and iii.
    b. ii. and iv.
    c. ii. and iii.
    d. None of these

19. The cup shaped part of nephron is called
    a. glomerulus. b. Malpighian Body. c. Bowman's capsule. d. all of these.

20. Which one of the following is not reabsorbed from the primary filtrate?
    a. Amino acid b. Urea c. Water d. Glucose

21. Urine is stored in _____ before they are passed out of the body.
    a. kidney b. ureter c. urethra d. urinary bladder

22. Nephrons are
    a. functional unit of excretory system. b. functional unit of nervous system.
    c. functional unit of kidney. d. none of these.

23. Name the organs that make up the excretory system in humans.
    a. Two kidneys b. Two ureters c. Bladder and urethra d. All of these

24. The principal nitrogenous excretory compound in humans is synthesized in the
    a. liver. b. kidney. c. blood. d. spleen.

25. The muscular tube which carries urine from kidney to urinary bladder is
    a. urethra. b. ureter. c. collecting duct. d. nephric tubule.

CHAPTER 2: CONTROL AND COORDINATION

Pick the correct option:

1. Which of the following hormone controls the basal metabolic rate?
   a. Growth hormone b. Adrenaline c. Thyroxine d. Insulin
2. The plant hormone which promotes cell division is
   a. auxin. b. cytokinin. c. Gibberellin. d. abscisic acid.
3. We suddenly withdraw our hand when a pin pricks. The response of this action is
   a. nerve impulse. b. muscle contraction. c. reflex action. d. reflex arc.
4. Which of the following tissues provide control and coordination in animals?
   a. Nervous and skeletal connective tissue b. Muscular and skeletal connective tissue
   c. Muscular and blood connective tissue d. Muscular and nervous tissue
5. If our hand is accidentally placed on a hot iron, we quickly pull our hand away. The hot iron represents
   a. stimulus. b. response. c. impulse. d. receptor.
6. Which of the following receptor is located in nose?
   a. Tango receptor b. Gustatory receptor c. Olfactory receptor d. Photoreceptor
7. Electrical impulse is generated at the _____ part of neuron.
   a. axon b. cyton c. nerve ending d. dendrite
8. The nerve which transmits messages from central nervous system to muscle is
   a. motor neuron. b. relay neuron. c. sensory neuron. d. afferent neuron.
9. The junction between two adjacent neuron is
   a. neuromuscular junction. b. nerve junction. c. synapse. d. sensory junction.
10. Which part of the brain helps in respiration?
    a. Midbrain b. Pons c. Cerebrum d. Cerebellum
11. The gland which secretes the growth hormone is
    a. adrenal gland. b. pancreas. c. pituitary gland. d. hypothalamus.
12. Main function of cerebrum is
    a. thinking. b. memorising. c. balancing and posture. d. both (a) and (b).
13. Which part of the brain controls the peristaltic movement of the alimentary canal?
    a. Pons b. Medulla c. Cerebrum d. Cerebellum
14. The opening of *Dandelion* petals in bright light during day and closing the petals in dark at night is an example of
    a. phototropism. b. photonasty. c. thigmonasty. d. chemotropism.
15. Movement of sunflower in accordance with the path of Sun is due to
    a. chemotropism. b. geotropism. c. phototropism. d. hydrotropism.
16. The growth of tendril in pea plant is due to
    a. phototropism. b. thigmotropism. c. thigmonasty. d. photonasty.

17. The cells of *Mimosa* leaves change shape by
    a. swelling or shrinking.
    b. changing the amount of water in them.
    c. both (a) and (b).
    d. none of these.

18. Cerebellum, medulla and pons are parts of
    a. forebrain.
    b. midbrain.
    c. spinal cord.
    d. hindbrain.

19. Which of the following is a cerebral reflex?
    a. Pulling away hand on touching hot object
    b. Knee jerk reflex by tapping under knee
    c. Change in size of pupil in response to bright light
    d. Both (b) and (c)

20. Feedback mechanism
    a. helps in reflex action.
    b. resets the nerve cell.
    c. regulates the amount of hormone.
    d. transmits nerve impulse.

21. Gustatory receptor is present in the
    a. skin.
    b. nose.
    c. tongue.
    d. ears.

22. Which of the following are mismatched pairs?
    i. Ovary - Progesterone
    ii. Pancreas – Growth hormone
    iii. Pituitary - Thyroxine
    iv. Testes – Testosterone
    a. i. and ii.
    b. ii. and iv.
    c. ii. and iii.
    d. i. and iii.

23. Iodine is necessary for the synthesis of
    a. thyroxine.
    b. adrenaline.
    c. insulin.
    d. growth hormone.

24. Which of the following is incorrect about nervous system?
    a. Electrical impulse quickly responds to stimulus
    b. Electrical impulse reaches to every cell of the animal body
    c. Nerve impulses pass along a neuron in one direction
    d. None of these

25. Which of the following is a mixed gland?
    a. Pancreas
    b. Ovary
    c. Testes
    d. All of these

26. Which of the following statements is incorrect about adrenaline hormone?
    a. It is produced in adrenal gland
    b. It controls the metabolism of carbohydrate, protein and fat
    c. It increases the heart beat
    d. It increases the rate of respiration

27. Dwarfism is caused due to
    a. over secretion of hormone produced by pancreas.
    b. over secretion of hormone produced by pituitary gland.
    c. under secretion of hormone produced by pancreas.
    d. under secretion of hormone produced by pituitary gland.

28. All voluntary actions of the body is controlled by

a. cerebrum. b. cerebellum. c. mid brain. d. medulla.

29. Which of the following is released at the synaptic cleft?

a. Hormones b. Neurotransmitters c. Lymph d. Cerebrospinal fluid

30. Plants bend towards a source of light as a result of

i. more growth of cell towards sunlight.

ii. more growth of cell away from sunlight.

iii. equal distribution of auxin in the stem.

iv. unequal distribution of auxin in the stem.

a. i. and iii.

b. ii. and iv.

c. ii. and iii.

d. i. and iv.

CHAPTER 3: REPRODUCTION IN PLANTS AND ANIMALS

Pick the correct option:

1. Which is the basic event in gamete formation?
   a. Making copies of cell organelles
   b. Increase in cell size
   c. Cell division
   d. DNA replication

2. Which of the following regarding variation is incorrect?
   a. Variation occurs due to errors during copying of DNA
   b. Variation is beneficial for the survival of the species
   c. Variation is minimum in sexual reproduction
   d. None of these

3. *Leishmania* reproduces through
   a. multiple fission.
   b. longitudinal binary fission.
   c. transverse binary fission.
   d. budding.

4. Which one of the following reproduces by multiple fission?
   a. Kala azar parasite
   b. Malaria parasite
   c. Yeast
   d. Bacteria

5. The organism which reproduces by fragmentation is
   a. *Spirogyra.*
   b. *Planaria.*
   c. *Rhizopus.*
   d. *Hydra*.

6. Which method of vegetative propagation is used in jasmine?
   a. Layering
   b. Grafting
   c. Cutting
   d. Tissue culture

7. The ovary releases an egg approximately every
   a. 10 days.
   b. 14 days.
   c. 21 days.
   d. 28 days.

8. Which of the following is a bacterial sexually transmitted disease?
   a. AIDS
   b. Herpes
   c Syphilis
   d. None of these

9. After fertilization, the ovules of a flower develop into
   a. fruits.
   b. seeds.
   c. seedlings.
   d. none of these.

10. Which one of the following does not lead to formation of clones?
    a. Vegetative propagation
    b. Fragmentation
    c. Fertilization
    d. Budding

11. The zygote of maize plant has 20 chromosomes. How many chromosomes are present in its endosperm?
    a. 10
    b. 20
    c. 30
    d. 40

12. The embedding of embryo in the wall of uterus is known as
    a. fertilization.
    b. implantation.
    c. ovulation.
    d. placentation.

13. Unisexual flower is produced by
    a. papaya.
    b. watermelon.
    c. mustard.
    d. both (a) and (b).

14. When the seed germinates, the (i) _____ develops into root and (ii) _____ into shoot.
    a. (i) plumule, (ii) radicle
    b. (i) radicle, (ii) plumule
    c. (i) cotyledon, (ii) endosperm
    d. (i) radicle, (ii) cotyledon

15. Testes in human males lie in the scrotal sac as it helps in the
    a. process of mating.
    b. formation of sperm.
    c. easy transfer of sperms.
    d. all of these.

16. The number of chromosomes of all the organisms of a particular species remains constant due to
    a. mitosis. b. meiosis. c. cell division. d. DNA replication.

17. The two organisms which can regenerate fully from cut body parts are
    a. *Paramecium* and *Hydra.* b. *Hydra* and *Planaria.*
    c. *Planaria* and *Leishmania.* d. *Plasmodium* and *Planaria*.

18. Sexually transmitted diseases are protected by
    a. intra uterine contraceptive device. b. surgical method of contraception.
    c. barrier method of contraception. d. oral pills.

19. Which of the following event does occur if ovum remains unfertilized?
    a. Implantation b. Ovulation c. Placentation d. Menstruation

20. Site of fertilization in human being is
    a. uterus. b. vagina. c. Fallopian tube. d. cervix.

21. Site of implantation in human being is
    a. uterus. b. vagina. c. Fallopian tube. d. cervix.

22. Which of the following are not the functions of ovary at puberty?
    i. Production of sperm
    ii. Secretion of oestrogen
    iii. Production of testosterone
    iv. Production of ovum
    a. i. and ii.
    b. i. and iv.
    c. ii. and iv.
    d. i. and iii.

23. Nutrition is provided to the developing embryo through
    a. placenta. b. uterus. c. oviduct. d. amniotic fluid.

24. Which of the following is incorrect about human male reproductive system?
    a. Testes are present in scrotal sac b. Testes secrete testosterone
    c. Sperm is produced in the seminal vesicles d. None of these

25. Accessory gland in male reproductive system is
    a. prostate gland. b. seminal vesicle. c. Cowper's gland. d. all of these.

26. The part of the seed that is known as the future plant is
    a. cotyledons. b. seed coat. c. germ cells. d. embryo.

27. Along the path of the vas-deferens the secretions of which gland provide nutrition to the sperms?
    a. Prostate glands b. Seminal vesicles c. Scrotum d. Urinary bladder

28. During favourable conditions, *Amoeba* reproduces by
    a. multiple fission. b. binary fission. c. budding. d. fragmentation.

29. A pair of duct arising from testis, which carry sperms are
    a. scrotum. b. vas deferens. c. oviduct. d. seminal vesicles.

30. Which of the following reproduces by spore formation?
    a. *Bryophyllum* b. *Hydra* c. *Rhizopus* d. *Leishmania*

CHAPTER 4: HEREDITY AND EVOLUTION

Pick the correct option:

1. The genetic constitution of an individual organism is known as its
   a. phenotype. b. homozygosity. c. genotype. d. allele.
2. Indians are genetically the closest to
   a. chimpanzees. b. monkeys. c. gorillas. d. Japanese schoolboys.
3. After selfing of the F_1 plants in Mendel's dihybrid cross, it was observed that
   a. only parental traits were expressed in F_2 generation.
   b. only recombinant traits were expressed in F_2 generation.
   c. both parental and recombinant traits were expressed in F_2 generation.
   d. only dominant trait was expressed in F_2 generation.
4. The characters which can be observed in an organism is known as its
   a. dominant traits. b. phenotype. c. genotype. d. recessive traits.
5. Mendel's contribution to genetics is
   a. Theory of natural selection. b. Theory of incomplete dominance.
   c. Principle of genetic recombination. d. Law of independent assortment.
6. The forelimbs of man, cat, bat and whale are
   a. homologous organs. b. analogous organs. c. connecting links. d. phylogenic organs.
7. Which chromosome is not in a perfect pair in human males?
   a. Chromosome 13 b. X chromosome c. Y chromosome d. Both (b) and (c)
8. *Homo sapiens* has genetic roots in
   a. Australia. b. Africa. c. Europe. d. Asia.
9. Which of the following is an acquired trait?
   a. Hair colour b. Height c. Eye colour d. Cut nose
10. Which one of the following has been produced from wild cabbage by artificial selection for sterile flower?
    a. Red cabbage b. Cauliflower c. Kale d. Kohlrabi
11. Wild cabbage has evolved into new varieties like cabbage, broccoli and cauliflower by
    a. genetic drift. b. reproductive isolation. c. natural selection. d. artificial selection.
12. Which of the following factor does not lead to speciation?
    a. Genetic drift b. Sex determination c. Natural selection d. Geographical isolation
13. Homologous organs are organs that have
    a. different functions and different origins. b. same function and similar origin.
    c. same function but different origins. d. different functions but similar origin.
14. Which of the following is totally impossible outcome of Mendel's experiment?
    a. 3 tall 1 short plant b. 24 tall and 8 short plants
    c. 8 tall and 0 short plants d. 4 tall plants and 1 medium height plant.
15. If a cross is made between hybrid tall and red flowered plant (TtRr) with dwarf and white flowered one(ttrr). What will be the genotypes of plants of F_1 generation?
    a. TtRr, TtRR, TTRr, Ttrr in the ratio of 1:1:1:1 b. TtRr, Ttrr, ttRr, ttrr in the ratio of 1:1:1:1
    c. TtRR, TTRR, ttRr, Ttrr in the ration of 1:1:1:1 d. TTRR, TtRR, TTRr, Ttrr in the ration of 1:1:1:1

16. Which of the following is an inherited trait?
    a. Height of a person b. Weight of a person c. Both (a) and (b) d. None of these

17. A tall pea plant was crossed with a dwarf plant and two types of progenies tall and dwarf are produced in the ratio of 1:1. What are the genotypes of the parents?
    a. TT and tt b. Tt and TT c. Tt and Tt d. Tt and tt

18. Sex is not genetically determined in
    a. turtle. b. crocodile. c. snail. d. all of these.

19. In pea plants, the pods may be inflated (I, dominant) or constricted (i, recessive). What proportion of the offspring would be expected to be inflated if Ii is crossed with ii?
    a. 25% b. 50% c. 75% d. 100%

20. Gene expresses the trait by
    a. replicating its DNA. b. transcribing its DNA to RNA.
    c. translating the information on DNA to protein. d. transcribing the RNA to DNA.

21. Our teeth and elephant's tusks are
    a. homologous organs. b analogous organs. c. homozygous organs. d. heterozygous organs.

22. In human sex determination, a zygote which has inherited an X- chromosome from father will be
    a. a male child. b. a female child. c. twins. d. either male or female.

23. In man, brown eyes (B) are dominant to blue (b) and dark hair (R) dominant to red hair (r). A man with blue eye and dark hair (whose mother was red haired) marries a woman with brown eyes and red hair (whose father was blue eyed). What are the genotypes of the man and his wife?
    a. bbRr and Bbrr b. bbRR and BBrr c. bbRr and BBrr d. BBrr and Bbrr

24. In human beings, blue eye colour (b) is recessive to brown eye colour (B). A brown eyed man has a blue eyed mother. What are the possible genoypes of the man, his mother and his father?
    a. Bb, bb , BB b. Bb, bb, Bb c. Bb, bb, bb d. Both (a) and (b)

25. When a tall pea-plant (TT) was crossed with a short pea-plant (tt), the progenies were all tall plants because
    a. tallness is the recessive trait. b. shortness is the dominant trait.
    c. height of pea-plant is not governed by gene T or t. d. tallness is the dominant trait.

26. Select the group which shares the maximum number of common characters.
    a. Two individuals of a species b. Two species of a genus
    c. Two genera of a family d. Two families of a class

27. A Mendelian experiment consisted of breeding round yellow with wrinkled green seeded plants. The progeny were all round but half of them were green. What is the genetic makeup of round yellow parent?
    a. RRYY b. RrYy c. RRyy d. RRYy

28. Which of the following leads to change in gene frequency without adaptation?
    a. Genetic drift b. Natural selection c. Both (a) and (b) d. None of these

29. Dihybrid cross is related to the law of
    a. dominance. b. segregation. c. independent assortment. d. all of these.

30. What is the difference between genetic drift and change due to natural selection?
    a. Genetic drift does not require the presence of variation.
    b. Genetic drift never occurs in nature, natural selection does.
    c. Genetic drift does not involve competition between members of a species.
    d. There is no difference.

CHAPTER 5: SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

Pick the correct option:

1. Coliforms are
   a. group of bacteria naturally found in human intestine.
   b. group of bacteria which contaminates water.
   c. group of viruses which contaminates water.
   d. both (a) and (b).

2. Bundhis system of irrigation is common in
   a. Madhya Pradesh.
   b. Himachal Pradesh.
   c. Bihar.
   d. Kerala.

3. Amrita Devi Bishnoi sacrificed her life to protect the forest of
   a. neem trees.
   b. khejri trees.
   c. mango trees.
   d. banyan trees.

4. Which of the following is not a greenhouse gas?
   a. Methane
   b. Sulphur dioxide
   c. Carbon dioxide
   d. Nitrous oxide

5. We should conserve forest and wild life to
   a. preserve biodiversity.
   b. control resources.
   c. obtain firewood.
   d. use forest produce for industries.

6. Which one of the following is not a stakeholder in forest ecosystem?
   a. Nature enthusiasts
   b. Industrialists
   c. Tourists
   d. Local people

7. When fossil fuels are burnt in insufficient supply of oxygen, _____ gas is formed.
   a. carbon dioxide
   b. carbon monoxide
   c. both (a) and (b)
   d. None of these

8. Which of the following element is not found in fossil fuels?
   a. Sulphur
   b. Nitrogen
   c. Iron
   d. Carbon

9. Which environmental problem is associated with the construction of high rise dams?
   a. A large number of people get displaced.
   b. It contributes to deforestation and loss of biodiversity.
   c. It involves the spending of huge amount of money.
   d. All of these

10. The Indira Gandhi Canal has brought greenery to considerable areas of
    a. Rajasthan.
    b. Gujarat.
    c. Bihar.
    d. Madhya Pradesh.

11. Water stored in ground
    a. recharges well.
    b. provides moisture for vegetation.
    c. does not provide breeding ground for mosquitoes.
    d. all of these.

12. Arabari forests of Bengal is dominated by
    a. teak.
    b. bamboo.
    c. sal.
    d. mangrove.

13. It is important to make small check dams across the flooded gullies to
    i. hold water for irrigation.
    ii. hold water and prevent soil erosion.
    iii. recharge ground water.
    iv. hold water permanently.
    a. i. and iv.
    b. ii. and iii.
    c. iii. and iv.
    d. ii. and iv.

14. An eco-friendly activity among the following is
    a. using car for transportation.
    b. using polybags for shopping.
    c. using fluorescent tube at home.
    d. using solar energy to generate power at home.

15. The Bishnoi community in Rajasthan is associated with the conservation of
    a. forest and wildlife. b. water resources. c. fossil fuels. d. all of these.

16. Which of the following gases cause acid rain?
    a. Oxides of hydrogen b. Oxides of sulphur c. Oxides of nitrogen d. Both (b) and (c)

17. Dams help to
    i. produce electricity.
    ii. rehabilitate people.
    iii. conserve biodiversity.
    iv. provide water for irrigation.
    a. i. and ii.
    b. i. and iii.
    c. i. and iv.
    d. ii. and iv.

18. Watershed management
    a. prevents water shortage.
    b. mitigates floods and droughts.
    c. increases the income of watershed community.
    d. all of these.

19. A traditional method of water harvesting in Rajasthan is
    a. surangams. b. khadins. c. bandharas. d. pynes.

20. Ganga action plan came about in the year
    a. 1955. b. 1975. c. 1986. d. 1995.

21. Water pollution can be identified by checking
    a. the pH of water.
    b. the presence of coliforms.
    c. both (a) and (b).
    d. none of these.

22. We should manage our natural resources for
    a. short term perspective.
    b. damaging our environment.
    c. equitable distribution of resources.
    d. none of these.

23. Tendu leaves are used
    a. for making papers.
    b. for making bidis.
    c. as fodders for cattles.
    d. for making baskets.

24. Which of the following microorganisms is coliform indicator in water?
    a. *Amoeba* b. *Lactobacillus* c. *Euglena* d. *Escherichia coli*

25. Plantation of which trees cause their monoculture?
    a. *Eucalyptus* b. Teak c. Pine d. All of these

26. Which famous movement was started in Reni village in Garhwal?
    a. Joint forest management b. Bahuguna movement
    c. Chipko movement d. Bishnoi movement

27. Sardar Sarovar Dam is built over river
    a. Ganga. b. Narmada. c. Yamuna. d. Brahmaputra.

28. Which of the following can be considered for biodiversity hotspot?
    a. Forest b. Ocean c. Mountain d. Desert

29. Surangams are traditional water harvesting system in
    a. Madhya Pradesh. b. Maharashtra. c. Kerala. d. Karnataka.

30. Kattas is an ancient method of water harvesting in
    a. Tamil Nadu. b. Karnataka. c. Bihar. d. Rajasthan.

CHAPTER 6: OUR ENVIRONMENT

Pick the correct option:

1. Which of the following is not a part of biotic community?
   a. Algae b. Fish c. Oxygen d. Bacteria
2. Which of the following is biodegradable?
   a. Aluminum foil b. Dry leaves c. Plastic toy d. Polyester
3. Primary consumer among the following is
   a. deer. b. rabbit. c. sheep. d. all of these.
4. Which of the following is an artificial ecosystem?
   a. Crop land b. Garden c. Forest d. Both (a) and (b)
5. In a food chain comprising protozoa, algae, man and fish, the concentration of harmful chemicals will be maximum in
   a. algae. b. man. c. fish. d. protozoa.
6. Which is a secondary consumer in a garden ecosystem?
   a. Grasshopper b. Grass c. Frog d. Snake
7. In food chain, herbivores constitute the
   a. first trophic level. b. second trophic level. c. third trophic level. d. fourth trophic level.
8. Which of the following constitute a food chain?
   a. Plant, apple, butterfly, man b. Grass, spider, bee, buffalo
   c. Plant, insect, toad, snake d. Algae, amoeba, fish, cow
9. The third trophic level of a grassland food chain can be
   a. snake. b. grasshopper. c. grass. d. rabbit.
10. In the following food chain, how much energy will the hawk get if the energy available at the producer level is 100 J?
    Plants → Mice → Snake → Hawk
    a. 1000 J b. 10 J c. 1 J d. 0.1 J
11. Which organization succeeded in forging an agreement to freeze CFC production at 1986 levels?
    a. UNESCO b. UNICEF c. UNEP d. WHO
12. Oxygen is converted to ozone by the action of
    a. CFCs. b. alpha radiation. c. UV radiation. d. gamma radiation.
13. Which of the following gets the minimum energy through the food chain in an ecosystem?
    a. Producer b. Tertiary consumer c. Primary consumer d. Secondary consumer
14. If the energy transferred to the tertiary consumer in a food chain is 0.25 J, how much energy is available at the producer level?
    a. 250 J b. 0.025 J c. 25 J d. 2500 J
15. Mr. Galgotia eats curd. In this case, which trophic level will he occupy?
    a. Second trophic level b. First trophic level c. Third trophic level d. Fourth trophic level
16. Which of the following is not true regarding an ecosystem?
    a. Food web is more stable than food chain. b. The flow of energy in an ecosystem is unidirectional.
    c. Green plants capture 10% of sunlight that falls on it. d. Flow of material in an ecosystem is cyclic.

17. If a deer is eaten by lion, then energy is transferred from
    a. producer to primary consumer.
    b. primary consumer to secondary consumer.
    c. secondary consumer to tertiary consumer.
    d. none of these.

18. The maximum concentration of harmful chemicals is found in
    a. producer.
    b. primary consumer.
    c. secondary consumer.
    d. tertiary consumer.

19. The depletion of ozone in the upper atmosphere is mainly due to emission of
    a. CFC.
    b. UV rays.
    c. greenhouse gases.
    d. all of these.

20. In biological magnification, there is a progressive
    a. increase in the body weight through successive trophic levels.
    b. increase in the number of organisms through successive trophic levels.
    c. increase in the level of harmful chemicals through successive trophic levels.
    d. increase in the energy through successive trophic levels.

21. Trophic level represents
    a. biomass weight.
    b. position of an organism in food chain.
    c. number of organisms in the food web.
    d. harmful chemicals.

22. The two basic processes that operate in an ecosystem are
    a. nutrient cycling and energy flow.
    b. photosynthesis and nutrient cycling.
    c. photosynthesis and energy flow.
    d. none of these.

23. The total biomass in a terrestrial ecosystem is greatest for
    a. primary consumer.
    b. producer.
    c. secondary consumer.
    d. tertiary consumer.

24. The water of a lake was accidentally polluted with run off carrying DDT. Which of the following is the most affected organism?
    a. Fish eating birds living near the lake
    b. Fish living in the lake
    c. Algae growing in the lake
    d. Protozoa living in the lake

25. If all the deer are removed from a forest ecosystem by poaching, it will become
    a. more stable.
    b. less stable.
    c. will not be affected.
    d. none of these.

26. If 2 J of energy is available to lion in food chain comprising deer, grass and lion, how much energy will be available from the sun?
    a. 2000 J
    b. 20000 J
    c. 20 J
    d. 200 J

27. Which of the following limits the number of trophic levels in a food chain?
    a. Insufficient food supply from the producers
    b. Decrease in energy at higher trophic levels
    c. Decrease in number of organisms in the successive trophic levels
    d. Accumulation of harmful chemicals at higher trophic levels

28. Which is the functional unit of environment?
    a. Niche
    b. Ecosystem
    c. Biosphere
    d. Biome

29. Green plants are the producers in an ecosystem because
    a. they are widely distributed.
    b. they are fixed at one place in the soil.
    c. they can trap solar energy to make food.
    d. there are more herbivores than carnivores.

30. Which one of the following pairs belongs to the category of primary consumers?
    a. Eagle and snake
    b. Grasshoppers and deer
    c. Snake and frog
    d. Lion and tiger

ANSWERS

CHAPTER 1: LIFE PROCESSES – UNIT I: NUTRITION

1. b.	**2.** b.	**3.** b.	**4.** c.	**5.** a.	**6.** d.	**7.** b.
8. b.	**9.** c.	**10.** a.	**11.** c.	**12.** d.	**13.** a.	**14.** a.
15. b.	**16.** c.	**17.** a.	**18.** c.	**19.** d.	**20.** c.	**21.** b.
22. d.	**23.** d.	**24.** b.	**25.** d.	**26.** c.	**27.** a.	**28.** b.
29. a.	**30.** c.					

UNIT II: RESPIRATION

1. c.	**2.** b.	**3.** c.	**4.** b.	**5.** b.	**6.** a.	**7.** c.
8. b.	**9.** b.	**10.** c.	**11.** a.	**12.** c.	**13.** b.	**14.** d.
15. a.	**16.** b.	**17.** c.	**18.** c.	**19.** d.	**20.** a.	**21.** d.
22. d.	**23.** b.	**24.** c.	**25.** b.			

UNIT III: TRANSPORTATION

1. b.	**2.** b.	**3.** d.	**4.** c.	**5.** d.	**6.** c.	**7.** a.
8. a.	**9.** d.	**10.** b.	**11.** b.	**12.** a.	**13.** d.	**14.** d.
15. b.	**16.** d.	**17.** a.	**18.** c.	**19.** a.	**20.** b.	**21.** c.
22. a.	**23.** b.	**24.** a.	**25.** c.			

UNIT IV: EXCRETION

1. a.	**2.** c.	**3.** c.	**4.** c.	**5.** d.	**6.** b.	**7.** a.
8. c.	**9.** d.	**10.** d.	**11.** d.	**12.** c.	**13.** a.	**14.** c.
15. b.	**16.** b.	**17.** d.	**18.** b.	**19.** c.	**20.** b.	**21.** d.
22. c.	**23.** d.	**24.** a.	**25.** b.			

CHAPTER 2: CONTROL AND COORDINATION

1. c.	**2.** b.	**3.** c.	**4.** d.	**5.** a.	**6.** c.	**7.** d.
8. a.	**9.** c.	**10.** b.	**11.** c.	**12.** d.	**13.** b.	**14.** b.
15. c.	**16.** b.	**17.** c.	**18.** d.	**19.** c.	**20.** c.	**21.** c.
22. c.	**23.** a.	**24.** b.	**25.** d.	**26.** b.	**27.** d.	**28.** a.
29. b.	**30.** b.					

CHAPTER 3: REPRODUCTION IN PLANTS AND ANIMALS

1. d.	**2.** c.	**3.** b.	**4.** b.	**5.** a.	**6.** a.	**7.** d.
8. c.	**9.** b.	**10.** c.	**11.** c.	**12.** b.	**13.** d.	**14.** b.
15. b.	**16.** b.	**17.** b.	**18.** c.	**19.** d.	**20.** c.	**21.** a.
22. d.	**23.** a.	**24.** c.	**25.** d.	**26.** d.	**27.** b.	**28.** b.
29. b.	**30.** c.					

CHAPTER 4: HEREDITY AND EVOLUTION

1. c.	**2.** d.	**3.** c.	**4.** b.	**5.** d.	**6.** a.	**7.** d.
8. b.	**9.** d.	**10.** b.	**11.** d.	**12.** b.	**13.** d.	**14.** d.
15. b.	**16.** a.	**17.** d.	**18.** d.	**19.** b.	**20.** c.	**21.** a.
22. b.	**23.** a.	**24.** d.	**25.** d.	**26.** a.	**27.** d.	**28.** a.
29. c.	**30.** c.					

CHAPTER 5: SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

1. d.	**2.** a.	**3.** b.	**4.** b.	**5.** a.	**6.** c.	**7.** b.
8. c.	**9.** d.	**10.** a.	**11.** d.	**12.** c.	**13.** b.	**14.** d.
15. a.	**16.** d.	**17.** c.	**18.** d.	**19.** b.	**20.** c.	**21.** c.
22. c.	**23.** b.	**24.** d.	**25.** d.	**26.** c.	**27.** b.	**28.** a.
29. c.	**30.** b.					

CHAPTER 6: OUR ENVIRONMENT

1. c.	**2.** b.	**3.** d.	**4.** d.	**5.** b.	**6.** c.	**7.** b.
8. c.	**9.** d.	**10.** d.	**11.** c.	**12.** c.	**13.** b.	**14.** a.
15. c.	**16.** c.	**17.** b.	**18.** d.	**19.** a.	**20.** c.	**21.** b.
22. a.	**23.** b.	**24.** a.	**25.** b.	**26.** b.	**27.** b.	**28.** b.
29. c.	**30.** b.					