

1. A factor in an experiment that cannot be controlled but may influence the result of the experiment is
 - A. dependent variable
 - B. independent variable
 - C. confounding variable
 - C. controlled variable
2. Which of the following tools of a biologist is used to record positions accurately?
 - A. flow meter
 - B. data logger
 - C. dissecting kit
 - D. GPS receiver
3. A set tools used for cutting and studying the inside of a specimen is
 - A. petridish
 - B. theodolite
 - C. dissecting kit
 - D. P^H kit
4. Which of the following enzymes names given by adding the suffix-ase to the root name of substrate?
 - A. Papayin
 - B. Amylase
 - C. Polymerase
 - D. Pepsin
5. In enzyme "EC3.4.11.1" the second figure belongs to the _____ of the enzyme?
 - A. serial number
 - B. sub-class
 - C. sub sub-class
 - D. class
6. Which one is **true** about the non-competitive inhibitors?
 - A. They have complementary shape to the active site of an enzyme.
 - B. They have the same shape with the substrates.
 - C. They bind to the allosteric sites of the enzymes.
 - D. They are affected by the concentration of substrate.
7. Which food and its method of test are **incorrectly** matched?
 - A. emulsion test-lipid
 - B. Benedicts test-starch
 - C. iodine test-starch
 - D. burette test-protein
8. DNA differs from RNA in that it is

- A. much smaller B. less stable C. replicates itself D. single stranded
9. The cell wall of prokaryotic cells is often made from
- A. cellulose B. chitin C. phospholipids D. peptidoglycan
10. Which of the following organelles considered as the cellular post office?
- A. Endoplasmic reticulum B. Mitochondria
C. Golgi apparatus D. Vacuole
11. Which of the following organelles maintain turgor pressure inside the cell?
- A. Vacuoles B. Ribosomes C. Lysosomes D. Peroxisomes
12. A group of proteins in the cell that is responsible for cell signaling and recognition is
- A. carrier proteins B. glycoproteins C. cholesterol D. channel proteins
13. Which one is **true** about the cell transport?
- A. Water moves across the plasma membrane by osmosis.
B. Simple diffusion requires cellular energy (ATP).
C. Active transport across the plasma membrane occurs along concentration gradient.
D. Facilitated diffusion belongs to active transport.
14. What will happen if you put RBCs in a sea water(salty water)?
- A. It will shrink B. It will become turgid C. It will burst D. No change occurs
15. ATP is adapted to its role because it,
- A. releases energy in relatively small amount B. releases energy in single-step hydrolysis
C. cannot escape from the cell D. all are correct
16. Which of the following pathways in aerobic respiration occurs outside the mitochondrion?
- A. Glycolysis B. Link reaction C. Krebs cycle D. Electron transport system
17. About 90% of ATP from the aerobic respiration is produced by

- A. proton pumps
- B. Oxidative level phosphorylation
- C. Substrate level phosphorylation
- D. ATPsynthase

18. A five carbon compound which reacts with CO_2 to form a six carbon compound is called

- A. glucose
- B. pyruvate
- C. oxaloacetate
- D. ribulose biphosphate

19. Which pairs of light wave lengths are absorbed by plants most during photosynthesis?

- A. red & green
- B. blue & yellow
- C. red & blue
- D. red & orange

20. Which of the following enzymes is able to bind to both carbon dioxide and oxygen?

- A. PEP carboxylase
- B. rubisco
- C. ribulose biphosphate carboxylase oxygenase
- D. B & C

21. One of the following is **incorrect** about Gram positive bacteria.

- A. They are more resistant to antibiotics.
- B. They have thin layer of peptidoglycan
- C. They secrete more dangerous endotoxins.
- D. A & C

22. Identify the one that is not transmitted by pathogens.

- A. Hypertension
- B. Typhoid fever
- C. Malaria
- D. AIDS

23. Which one of the following processes reduces the level of CO_2 in the atmosphere?

- A. fossilization
- B. decomposition
- C. photosynthesis
- D. respiration

24. In sulphur cycle, hydrogen sulphide is oxidized to sulphur by

- A. thiobacillus
- B. desulphovibrio
- C. photosynthetic bacteria
- D. decomposers

25. Which of the following is true about ecological succession?

- A. pioneer species are the second to colonize an area.
- B. The most stable & complex community is formed by pioneer species.
- C. Complex community is highly affected by some environmental factors.
- D. As succession proceeds forward more ecological niches are created.

26. In a certain family, the mother is blood group B and her husband's blood group is unknown.

Their children's blood group is 50% AB, and 50% B; the possible blood group genotype of

their father will be

- A. homozygous B B. homozygous A C. heterozygous A D. O

27. A mating between two heterozygous individuals such as Aa X Aa, could produce offspring

of genotype

- A. homozygous recessive B. heterozygous
C. homozygous dominant D. all the above

28. Among the following alternatives, we belong to _____ species.

- A. *Australopithecus afarensis* B. *Homo habilis*
C. *Homo sapiens* D. *Homo erectus*

29. In Ivan Pavlov's classical conditioning the ringing of the bell is

- A. conditioned response B. reinforcement
C. conditioned stimulus D. unconditioned stimulus

30. Wood lice increase their movement in different directions in response to increased light

intensity this is an example of

- A. positive taxis B. kinesis C. negative taxis D. none of these

