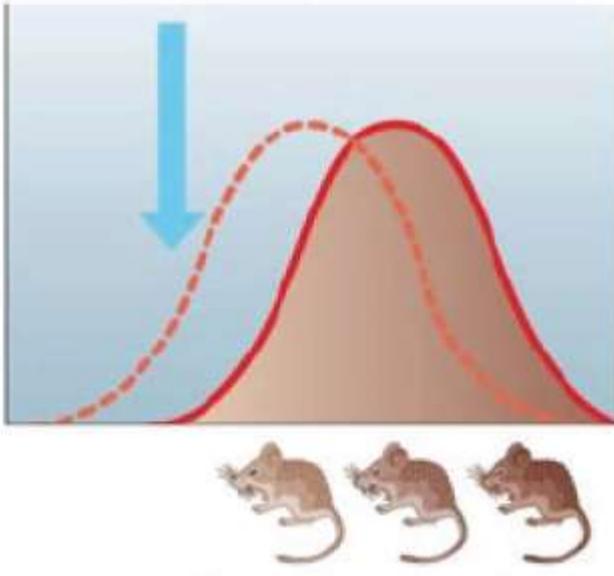


BIOLOGY

Instruction: You are offered the test items with one correct answer from four proposed ones.

1. Producer organism
 - A) grass
 - B) mushroom
 - C) snail
 - D) grasshopper
2. Carotenoids give plants
 - A) yellow and orange colors
 - B) green color
 - C) red and blue colors
 - D) yellow and blue colors
3. A unit of filtration in a kidney that regulates water balance and remove toxins
 - A) nephron
 - B) dendrite
 - C) axon
 - D) neuron
4. A part of brain that is response for balance and coordination of body
 - A) cerebellum
 - B) cerebrum
 - C) midbrain
 - D) frontal lobe
5. A fixed joint bone found
 - A) cranium
 - B) chest cavity
 - C) vertebra
 - D) shoulder
6. Have double fertilization
 - A) Algae
 - B) Mosses
 - C) Angiosperms
 - D) Ferns
7. Cells divide permanently during
 - A) cancer
 - B) AIDS
 - C) COVID-19
 - D) hepatitis
8. Do not have membranes
 - A) centrosome
 - B) Golgi body
 - C) lysosome
 - D) endoplasmic reticulum

9. Cross between homozygous red plant and homozygous white plant gives pink offspring. It is an example of
- A) epistasis
 - B) incomplete dominance
 - C) complete dominance
 - D) codominance
10. Method used in bioinformatics
- A) PCR
 - B) Gel-electrophoresis
 - C) computational genome comparison
 - D) X-ray
11. The main difference of chordates from arthropods
- A) have a chitin
 - B) have a cephalothorax
 - C) do not have a backbone
 - D) have an endoskeleton
12. The teeth response for biting and cutting of food
- A) incisors
 - B) molars
 - C) canines
 - D) premolars
13. The type of the blood cells that have nucleus and they are response for blood clotting
- A) leucocytes
 - B) lymphocytes
 - C) thrombocytes
 - D) erythrocytes
14. Oxygen is used during the stage of aerobic respiration
- A) Krebs cycle
 - B) Formation of acetyl CoA
 - C) Glycolysis
 - D) Electron transport chain
15. Antidiuretic hormone (ADH) affects
- A) Collecting duct
 - B) Bowman's capsule
 - C) Henle loop
 - D) Distal tube



16. The graph shows
- Migrational selection
 - Disruptive selection
 - Stabilizing selection
 - Directional selection
17. Is NOT a significance of systematics
- Systematics helps to understand structure of an organism
 - Systematics helps to find relative organisms
 - Systematics helps to understand the evolution of an organism
 - Systematics helps to breed new organisms
18. Damage of diencephalon will affect
- movement
 - thermoregulation
 - hearing
 - coughing
19. A network of membranous tubules which synthesizes and transports lipids and detoxifies drugs
- rough endoplasmic reticulum
 - smooth endoplasmic reticulum
 - golgi body
 - vesicle
20. The interaction between nonallelic genes at two or more loci where one gene masking the appearance of another gene
- epistasis
 - incomplete dominance
 - polygenic inheritance
 - complementation

Instruction: You are offered the test items on the base of context with one correct answer from four proposed ones. Read the context attentively and do the items.

The cell

The cell is the smallest unit of matter that can carry on all the processes of life. Cells contain a variety of internal structures called organelles. An organelle is a cell component that performs specific functions for the cell. A large organelle near the centre of the cell is the nucleus. The presence or absence of a nucleus is important for classifying cells. In animal cells an internal framework called the cytoskeleton maintains the shape of the cell. The cell membrane controls the ease with which substances pass into and out of the cell. Some substances easily cross the membrane, while others cannot cross at all. For this reason, the cell membrane is said to be selectively permeable. Everything between the cell membrane and the nucleus is the cytoplasm. The cytoplasm consists of two main components: cytosol and organelles. Organelles are structures that work like miniature organs. They carry out specific functions in the cell. The most numerous organelles in almost all cells are ribosomes.

21. Site of protein synthesis

- A) smooth endoplasmic reticulum
- B) golgi body
- C) ribosomes
- D) mitochondria

22. The control center of the cell

- A) nucleus
- B) ribosome
- C) cilia
- D) vesicle

23. They are involved in the formation of spindle fibres in animal cells during cell division

- A) flagellas
- B) centrioles
- C) vacuoles
- D) peroxisomes

24. Metabolise the toxic hydrogen peroxide

- A) cytoplasm
- B) peroxisome
- C) mitochondria
- D) golgi body

25. Is not property of cell membrane

- A) allow chemical substances to enter the cell
- B) have fluid mosaic model
- C) lined with protein filaments called lamina
- D) selective permeable

Instruction: You are offered the test items with one or more correct answers.

26. Vascular tissue(s) of plants
- A) Phloem
 - B) Xylem
 - C) Sclerenchyma
 - D) Collenchyma
 - E) Cambium
 - F) Meristema
27. Unconditioned reflex(es)
- A) Coughing
 - B) Sneezing
 - C) Playing dombyra
 - D) Blinking
 - E) Ice-skating
 - F) Cleaning teeth
28. Function(s) of meiosis
- A) repair
 - B) production of spores
 - C) asexual reproduction
 - D) production of gametes
 - E) cloning
 - F) regeneration
29. Protein(s)
- A) cellulose
 - B) collagen
 - C) starch
 - D) histone
 - E) wax
 - F) hemoglobin
30. Chromosome consists of
- A) RNA
 - B) phospholipid
 - C) starch
 - D) DNA
 - E) protein
 - F) glucose

31. Organism(-s) that able to live without oxygen
- A) amoeba
 - B) yeast
 - C) volvox
 - D) paramecium
 - E) euglena
 - F) bacteria
32. Hormone(s) of adrenal glands
- A) adrenaline
 - B) glucocorticoid
 - C) insulin
 - D) growth hormone
 - E) glucagon
 - F) thyroxine
33. Sexual reproduction of animals
- A) Fertilization
 - B) Budding
 - C) Parthenogenesis
 - D) Fragmentation
 - E) Regeneration
 - F) Mitosis
34. Horses with C gene have a tail, horses with c do not have a tail. A is long hair, a is short tail. Heterozygous long tailed horse (AaCc) was crossed with heterozygous short tailed horse (aaCc). Possible offspring phenotype(s)
- A) 3/8 will have long tail
 - B) all will have long tail
 - C) 3/8 will have short tail
 - D) 1/2 will have long tail
 - E) 1/8 will have short hair, no tail
 - F) 1/2 will have short tail, no hair
35. Yellow seed color is dominant over green. Smooth seed is dominant over wrinkled. Heterozygous yellow and wrinkled plant was crossed with green and wrinkled plant. Possible offspring phenotype(s)
- A) 50% green and wrinkled
 - B) 100% yellow and wrinkled
 - C) 50% yellow and wrinkled
 - D) 100% yellow and smooth
 - E) 50% green and smooth
 - F) 25% yellow and wrinkled