



THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

STD X

Biology Answer Key

Time: 90min.
Score: 40

1. Lens of the eyes become opaque. (1)
2. d) This is the point of maximum visual clarity (1)
3. Thirst, Others are external stimuli. (1)
4. A - sensory nerve , B - motor nerve. (1/2 + 1/2)
5. Aqueous humor. (1)
6. Tear contains lysozyme. (1)
7. b) Colour blindness is caused due to the defect in the cone cells. (1)
d) Senses that evoke responses in organisms are called stimuli. (1)
8. a) Olfactory receptor,
b) Nose. (1+1)
9. A – Ommatidia
B – helps to detect the change in the balance of body in shark.
C – detects light in planaria
D – Jacobson’s organ. (1/2+1/2+1/2+1/2)
10. a) A – Rod cell B – Cone cell (1/2 +1/2)
b) Rhodopsin (1)
11. a) A - Central canal (1)
b) Sensory impulses reach the spinal cord through dorsal root
and motor impulses go out of the spinal cord through ventral root. (1)
12. b) taste particles dissolve in saliva.
d) taste receptors are stimulated.
a) impulses are generated.
c) nerve carries impulses to brain.
e) experiences the sense of taste. (1/2+1/2+1/2+1/2)

13. No, synapse is not only the junction between two neurons, but it is also the junction between a neuron and a muscle cell and a neuron and a glandular cell. (1+1)

14. a) A- Alzheimer's disease. (1+1)
 B- Parkinsons disease.
 b) Accumulation of an insoluble protein in the neural tissues of the brain.
 Neurons get destroyed. (1)

15. A - cerebrum.
 B – the largest part of the brain.
 C - co-ordinates muscular activities and maintains equilibrium of the body.
 D - controls involuntary activities like heart beat, breathing etc.
 E -Thalamus.
 F - Hypothalamus. (1/2+1/2+1/2+1/2+1/2+1/2)

16. A - auditory canal
 B - ear ossicles
 C - oval window
 D - hair cells
 E - auditory nerve
 F - cerebrum. (1/2+1/2+1/2+1/2+1/2+1/2)

17. a) Due to the difference in the distribution of certain ions. (1)
 b) The distribution of ions in that particular part changes and hence the inner surface becomes positively charged and the outer surface becomes negatively charged. This momentary charge difference stimulates its adjacent parts and similar changes occur there too. As this proceeds impulses get transmitted. (2)

18.

Sympathetic system	Parasympathetic system
Pupil dialates.	Hormone production decreases..
Peristalsis slows down.	Glucose gets converted to glycogen.

(1+1+1)

19. a) A (1)
b) curvature of the lens decreases, ciliary muscles relax and ligaments stretch. (2)
20. a) Internal ear. (1)
b) X-vestibular nerve ,Y- auditory nerve. (1+1)
c) Semicircular canals and vestibule. (1)
21. a) Reflex action. (1)
b) Spinal reflexes and cerebral reflexes. (1)
c) 1 - sensory neuron
2 - inter neuron,
3 - motor neuron
4 - related muscle. (1/2+1/2+1/2+1/2)
- 22.. a) cornea,
b) vitreous chamber
c) optic nerve, (1+1+1)
Redraw(1)