

Kerala SSLC Biology 2024 Answer Key

1. Photopsin / Iodopsine.
2. (c) Protein.
3. Eosinophil : Synthesizes chemicals required for the inflammatory responses.
4. Ethylene.
5. (b) Gene mapping.
6. (b) Charles Darwin.
7. (a). Alzheimer's.
(b) Accumulation of an insoluble protein in the neural tissues of the brain. Neurons get destroyed.
8. (i). The decreased production of thyroxine (hypothyroidism) during the foetal stage or infancy.
(ii) Thyroid.
(iii) Hypothalamus.
(iv) Diabetes insipidus.
9. (a). Crossing over of Chromosomes.
(b) A difference in the distribution of genes, causes the expression of new characters / variations in offsprings.
10. (a). Toxins, produced by the pathogen *Corynebacterium diphtheriae* destroy the cells in the mucus membrane.
(b). As haemophilia is a genetic disease, a complete cure is not possible.
11. Production of saliva decreases, Glycogen is converted to glucose.
12. (a). Theory of Chemical evolution / Oparin-Haldane hypothesis.
(b) Life originated as a result of the changes that occurred in the chemical substances in seawater, under specific conditions in primitive earth.
13. Lung cancer, Bronchitis, Emphysema (any 2) to the respiratory system.
Hypertension, Loss of elasticity of arteries, Decrease in functional efficiency of heart (any 2)
14. (a) X = Synaptic knob.
(b) Neurotransmitter (Acetylcholine/Dopamine).
(c) Neurotransmitter, secreted from the synaptic knob, stimulates the adjacent

dendrite or cell and new electric impulses are generated there

15. - Aromatic particles enter the nostrils. - These aromatic particles dissolve in the mucus.
 - Stimulate the olfactory receptor. - Generate impulses.
 - Impulses reach the brain. - Experiences smell.

16.

Tuberculosis	Loss of body weight, fatigue, persistent cough.	When the patient speaks, coughs or sneezes, the pathogens spread into the air.
Hepatitis	Dark yellow colour to the mucus membrane, white portion of the eyes and the nails.	Contaminated food and water, blood components and excreta of the patient.
Malaria	High fever with shivering and profuse sweating, headache, vomiting, diarrhoea, anaemia	Spread by female anopheles mosquito

17.

Blood Group	Antigens	Antibodies
A	A	b
B	B	a
AB	A and B	
O		a and b

18.

DNA	RNA
Deoxyribose sugar, Double helical model Thymine.	Ribose sugar, Uracil, Single strand.

19. (a). X= Plasmid / Circular DNA.

(b). Used as vector which contain ligated genes enter target cells. In both, the enzymes control chemical reactions, energy is stored in ATP molecules, genes determine hereditary traits and carbohydrates, proteins and fats are the basic substances. (any 3)

20. (a). Thyroid.

(b). Parathormone.

(c). Reabsorbs calcium from kidneys to blood.

21. (a). Germs are engulfed and destroyed.

(b). Reduces the rate of multiplication of pathogens. Increases the effect of phagocytosis.

(c). Reduces the chance of infection.

(d). helps to prevent bleeding and checks the entry of pathogens through wounds.

22.

