

# **S S L C EXAMINATION, MARCH 2014**

## **BIOLOGY ANSWER KEY**

Total Score: 40

1. a) Cone cells 1  
b) Eye spot 1  
c) Ammonia 1
- 2 a) EEG: Related with the treatment of heart diseases 1  
b) Uracil: Nitrogen bases in DNA 1
- 3 a) AIDS  $\frac{1}{2} + \frac{1}{2}$   
b) Unsterilized needles used by an AIDS patient contain blood in which HIV is present.
- 4 Super bugs are created by genetic engineering. Different types of bacterial genes are combined together and produced super bugs. 1
- 5 i) Parkinson disease 1  
ii) Deficiency of a neurotransmitter – dopamine. 1
- 6 Gibbon → Orang-utan → Gorilla → Chimpanzee 2
- 7 Ear canal → Eardrum → Ear ossicles →  
Oval window → Cochlea → Auditory nerve
- 8 3

Down syndrome	Turner syndrome
47 Chromosomes	Dwarfness
45 + XX/XY	44+ X
Mental Retardation	Female Character

9

(1+2)

a) Phagocytosis

b) i) Neutrophil near the bacterium  
iii) Engulf the bacterium into cell

ii) Forms pseudopodia  
iv) Get digested inside the cell.

10

a) Season 3

1

b) Vasopressin (ADH)

1

c) It regulates the reabsorption of water from the kidney tubules according to the body demand.

1

11

a) Afferent Vessel and Efferent vessel

(1+2)

b) Increases the blood pressure in glomerulus and enhances ultrafiltration.

12

3

a) After each generation resistance to DDT increases, ie. variation increases.

b) It is an example for Darwin's theory of Natural selection. Due to struggle for existence variations will arise and be transmitted into next generations.

c) The total population becomes resistant to DDT.

13

4

Disease	Pathogen	Mode of transmission
Chicken pox	Virus	Air
Filariasis	Filarial worm	Culex Mosquito
Cholera	Bacteria	Food and water
Malaria	Plasmodium	Anopheles Mosquito

OR

a) Dengue Fever

b) Blood platelet count decreases and internal bleeding

c) Two posters

14

a)

4

- x) Dwarfism            1) Became dwarf due to stunted growth of bones
- y) Gigantism            2) Growing tall with heavy body
- z) Acromegaly        3) Enlargement of internal organs and thickening of bones.
- b) The hormones which stimulate glands for secreting their hormones are tropic hormones.

OR

Oxytocin – Vasopressin

Secreted by Hypothalamus

Thyroxin – Calcitonin

Secreted by Thyroid gland

Adrenaline – Cortisol

Secreted by Adrenal Gland

Insulin – Glucagon

Secreted by Islets of Langerhans

15

4

- a) i) Cerebellum – co-ordinating muscular activities.
- b) ii) Medulla oblongata – Controls breathing.
- c) iii) Cerebrum – centre of intelligence.

Prepared By

Harikumar K

HSA

D V M N N M H S S MARANALLOOR