

SSLC EXAM 2013 MARCH

BIOLOGY ANSWER KEY

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D V M N N M H S S MARANALLOOR

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|---|-----|---|---|
| 1 | a) | Body Balance | 1 |
| | b) | Hippocrates | 1 |
| 2 | a) | Nephron. Others are parts the neuron. | 1 |
| | b) | Mumps. Diseases related with brain. | 1 |
| | c) | Ethylene. Hormones secreted in animals/man. | 1 |
| 3 | | | |
| | | Malaria: Plasmodium | 2 |
| | | Tuberculosis: Bacteria | |
| | | Chicken pox: Virus | |
| | | Ring worm: Fungus | |
| 4 | i) | Gibbon | 1 |
| | ii) | Loris: Nocturnal, solitary | 2 |
| | | Monkey: Diurnal, Colonial life | |
| 5 | i) | Cataract | 1 |
| | ii) | Eye lens become opaque. | |
| 6 | a) | Formulated the laws of inheritance. | 2 |
| | b) | Chromosome theory of heredity. | |
| | c) | James Watson and Francis Crick | |
| | d) | Marshall Nirenberg and Har Gobind Khorana. | |

OR

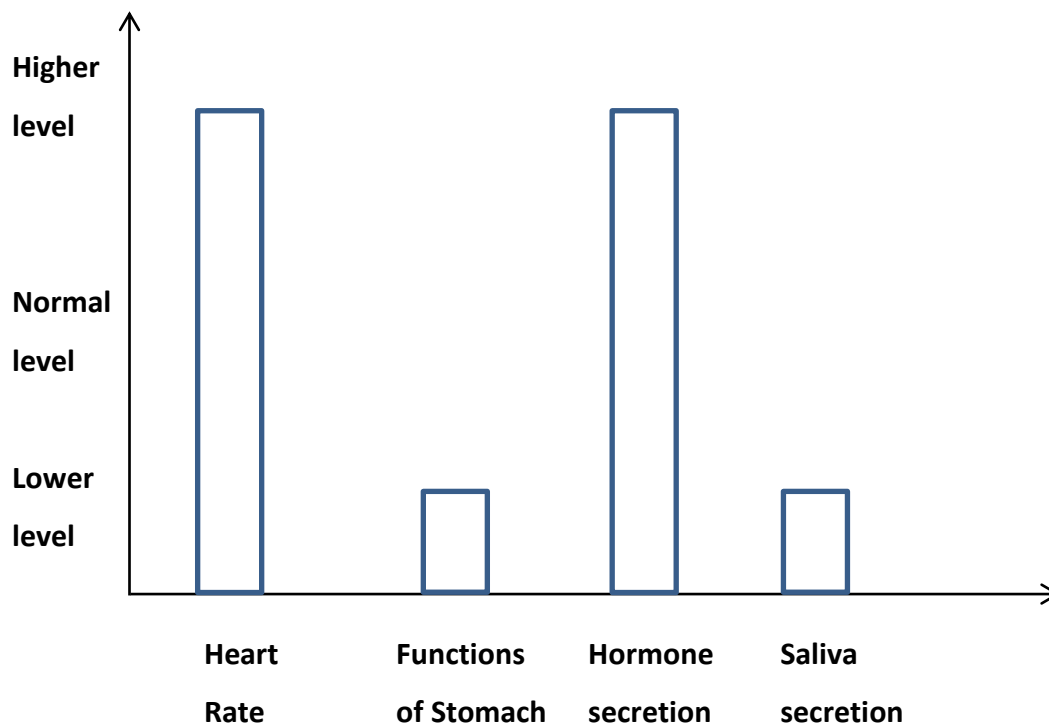
Nuclic acids	Sugar	Nitrogen base
DNA	Deoxyribose	Thymine
RNA	Ribose	Uracil

7 a) A - Summer season: B - Rainy/Winter season. 2

b) In summer season the ADH secretion increases. So more water is reabsorbed from the kidney tubule and quantity of urine decreases.

In rainy season the ADH secretion decreases and the quantity of urine increases.

8 2



9 a) Parathermone: 4

Over secretion – Blood calcium level increases. Kidney stones/Fragile bones

Less secretion - Blood calcium level decreases –Tetany

b) Vasopressin:

Over secretion: Quantity of urine decreases/ concentrated urine

Less secretion: Diabetes insipidus.

- 10 a) Kidney stone 2
 b) Calcium salts get sedimented in the kidney and ureter as grains.
 c) Dark coloured and turbid urine, back pain and fever, swelling of feet, ankles and face.
 d) Streptococcus infection, autoimmune deficiency syndrome, infection of urinary bladder.

- 11 a) Tar, nicotine, benzopyrin 2
 b) Hb has more affinity towards CO than O₂. Hb combines with CO and forms a stable compound, carboxyhaemoglobin.

12 2

Gland	Hormone	Target Tissue	Effects
Pancreas	Insulin	All tissues except nervous tissue	Lowers blood glucose level when it is increased
Adrenal Gland	cortisol	Liver, lipid tissues	Break down protein, lipids

- 13 a) Prevent bacterial growth 2
 b) Increases bacterial growth.
 c) Destroys germs/ phagocytosis- quick response
 d) Prevent infection/ Antigen- antibody- slow response

- 14 3
 a) Through genetic engineering a gene was introduced in Brinjal and it caused the production of a protein which destroys pest.
 b) Oil eating bacteria- super bugs, improved crop varieties, hormone production.
 c) Biological weapons, if super bugs are introduced in oil wells.

15 Some of the mosquitoes have resistive powers; they will survive while others perish. 2

Struggle for existence and survival of the fittest. They will be selected by the nature- natural selection. Darwin's theory.

- 16** **A** **Calcium ions** **2**
- B** **Enzyme**
- C** **Thrombin**
- D** **Platelets**

- 17** **A** **Lens** **4**
- B** **Pupil :** **Regulate the amount of light to lens and retina.**
- C** **Retina :** **Photoreceptor layer of the eye.**
- D** **Vitreous Chamber:** **Maintains shape of the eye ball.**