

# SSLC EXAMINATION, MARCH - 2019

## BIOLOGY

(English)

Time : 1½ Hours

Total Score : 40

### Instructions :

- The first 15 minutes is the cool-off time.
- You may use the time to read the questions and plan your answers.
- Answer only on the basis of instructions and questions given.
- Consider score and time while answering.

Answer any five questions from Q.No. 1 to 6. Each carries one score.

Score

5x1=5

- Identify the word pair relation and fill the blanks.
  - Monkeys : Cercopithecoidea :: Chimpanzee : \_\_\_\_\_
  - A.I. Oparin : Theory of chemical evolution :: Hugo de Vries : \_\_\_\_\_
- Find out the parts that are not related to retina from the following.
 

Photoreceptor, Yellow spot, Conjunctiva, Blind spot, Iris
- "Myelin sheath accelerates the speed of impulses through axon and provides nutrition to it."
  - How does myelin sheath form ?
- Identify the relation in the Indicator (A) and complete (B) accordingly.

Indicator (A)	(B)
DNA	RNA
↓	↓
Deoxyribose Sugar	(i) _____
↓	↓
ATGC	(ii) _____

- Find out the fungal diseases from the following :  
Malaria, Ringworm, Filariasis, Athlete's foot
- Complete the statement suitably :  
"In \_\_\_\_\_ (a) \_\_\_\_\_, the specialised part in pancreas two types of cells are found. Of these \_\_\_\_\_ (b) \_\_\_\_\_ cells produce insulin."

P.T.O.

Answer any six from Q.No. 7 to 13. Each carries two score.

7. Make suitable pairs of different white blood cells and the function they perform.

Monocyte  
Basophil  
Eosinophil  
Neutrophil

- Produces chemicals that can destroy bacteria
- Engulfs and destroys germs
- Stimulates other white blood cells
- Produces chemical substances needed for inflammatory response

8. Write the name of pathogens and symptoms of the given diseases :

A. Malaria

B. Tuberculosis

Pathogens : \_\_\_\_\_

\_\_\_\_\_

Symptoms : \_\_\_\_\_

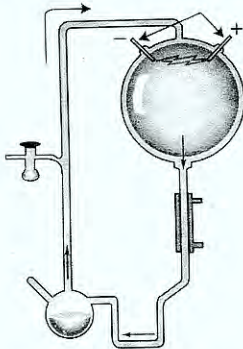
\_\_\_\_\_

9. Complete the table by selecting suitable items from the box :

	A	B	C
Disease	Alzheimer's	Parkinsons	Epilepsy
Cause	_____ (a) _____	_____ (b) _____	_____ (d) _____
Symptom	Loss of memory	_____ (c) _____	Epilepsy frothy discharge

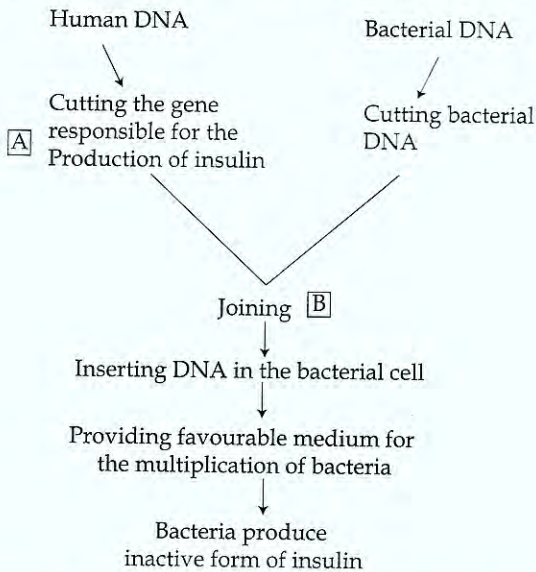
- Excess blood is lost even through minor injuries
- Loss of body balance
- Accumulation of insoluble proteins in the neural tissues of brain
- Production of dopamine reduces
- Irregular flow of electric charges in brain

10. Observe the illustration and answer the questions.



- (a) Name the Scientists who devised the experimental setup shown above.
- (b) Which theory of evolution is substantiated by this experiment ?

11. Observe the illustration and answer the questions.



- (a) Name the enzymes used for the processes A and B.  
 (b) Will the future generation of this bacteria have the ability to produce insulin? Why?

12. List out the four major concepts to be included in a blood donation campaign.

13. Mutations cause variations in organisms. It leads to evolution of species :

- (a) What is mutation?  
 (b) Explain two other factors that cause variations in organisms.

Answer any five from Q.No. 14 to 20. Each carries 3 score.

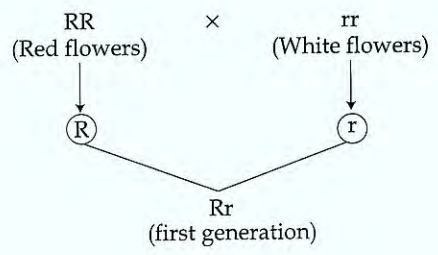
5x3=15

14. Observe the illustration and answer the questions.



- (a) Why do the forelimbs of these organisms show differences in external appearance?  
 (b) What inferences regarding evolution can be drawn from the anatomy of these organs?  
 (c) Write any two other scientific evidences which proves evolution.

15. Observe the illustration.



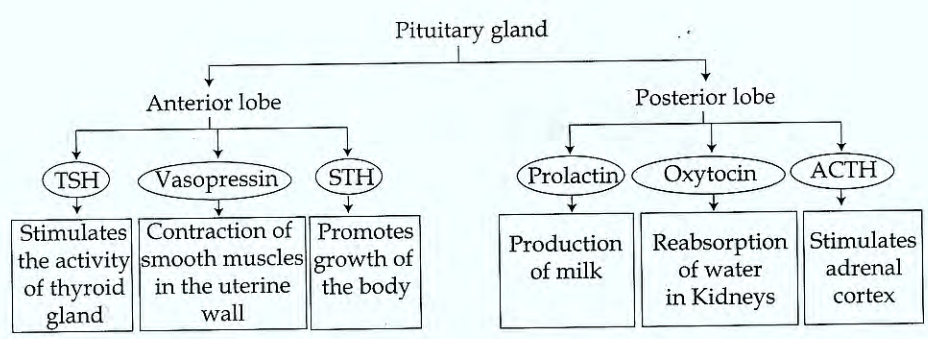
- (a) What does R, r denote in the illustration ?
- (b) Which character is expressed in first generation ? Why ?

16. "Smoking harmfully affects internal organs".

This is a general statement.

Explain how smoking affects brain, heart and lungs.

17. There are certain mistakes in the given chart. Find out and correct it.



18. Analyse the statement and answer the questions.

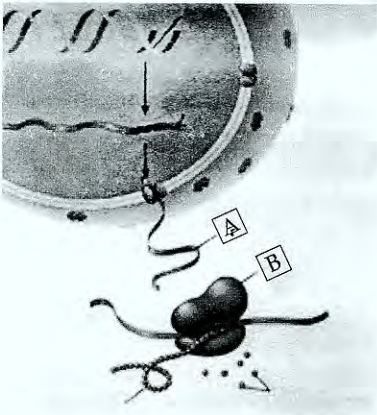
“Antibiotics, the miraculous medicines of 20<sup>th</sup> century helped a lot to bring many diseases under control. But the use of antibiotics without consulting doctor is not advisable”.

- Why antibiotics considered as miraculous medicines ?
- Write two side effects of antibiotics.

19. Correct mistakes if any in the underlined part of the given statements.

- Curvature of lens increases when viewing near objects.
- Vitreous humor is formed from blood, and is reabsorbed by blood.
- Membraneous labyrinth in the inner ear is filled with Perilymph.
- Eustachian tube amplifies and transmits the vibrations of tympanum to the internal ear.

20. Observe the figure and answer the questions :



- Identify the parts A and B.
- What is the function of 'A' ?
- Explain the process that takes place in 'B'.

Answer **any two** from Q.No. 21 to 23. Each carries 4 score.

21. Analyse the given informations related to plant hormones and answer the questions.

- (a) to increase the size of apple
- (b) to prevent dropping of premature fruits
- (c) to increase the production of latex
- (d) to enable flowering of pineapple plants at a time

Ethyphon

Ethylene

Gibberellin

Auxin

2, 4-D

- (i) Match hormones and their functions properly.
- (ii) Write the name and function of any other two hormones occur naturally in plants.

22. Observe the illustration and answer the following questions.

(A)



(B)



- (a) Name the cells (A) and (B).
- (b) Explain the role of these cells in making vision possible.
- (c) How impulses are generated in these cells when light rays fall on it ?