

# SSLC EXAMINATION, MARCH - 2021

## BIOLOGY

(English)

Time : 1½ Hours

Total Score : 40

### Instructions:

- 20 minutes is given as cool off time.
- Use cool off time to read the questions and plan your answers.
- Attempt the questions according to the instructions.
- Keep in mind, the score and time while answering the questions.
- The maximum score for questions from 1 to 36 will be 40.

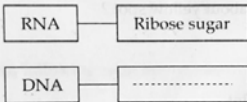
1 score for each question from 1 to 10.

Score

1. Complete the illustration according to the Model.

1

Model :



2. The blood group without antibody is :

1

- (a) A                      (b) B                      (c) AB                      (d) O

3. Identify the part of brain which helps to maintain homeostasis.

1

- (a) Cerebrum  
(b) Thalamus  
(c) Medulla oblongata  
(d) Hypothalamus

P.T.O.

4. Choose the correct pair. 1
- (a) Prolactin : Production of milk  
~~(b) Aldosterone : Promotes growth~~  
~~(c) Cortisol : Salt-water balance~~  
 (d) Melatonin : Maintains blood pressure
5. The protein produced through genetic engineering which is used against viral diseases : 1
- (a) Insulin ~~(b) Interferons~~  
~~(c) Endorphin~~ (d) Somatotropin
6. Identify the word pair relation and fill in the blank. 1
- Genetic scissors: restriction endonuclease  
 Genetic glue : ligase
7. Which of the following statement is true about yellow spot ? 1
- (a) There is no vision at this point.  
~~(b) Photoreceptors are absent here.~~  
 (c) The optic nerve begins from this point.  
 (d) This is the point of maximum visual clarity.
8. Which is known as youth hormone ? 1
- (a) Adrenaline (b) Thymosin  
 (c) Aldosterone (d) Testosterone
9. Identify the protozoal disease. 1
- (a) Malaria (b) AIDS (c) Rat fever (d) Nipah
10. Which organism belongs to cercopithecoidea ? 1
- (a) Gorilla (b) Gibbon (c) Monkey (d) Chimpanzee

2 scores for each question from 11 to 22.

11. Skin is considered as the safety shield of the body. Why? 2

12. Correct mistakes if any in the underlined part of given statements. 2

- (a) Substances responsible for taste should dissolve in mucus to stimulate the chemoreceptors.
- (b) Cochlea contains specialised sensory hair cells concerned with hearing.
- (c) Colour blindness is a condition due to the defect of the cone cells.
- (d) The cluster of photoreceptors of a housefly is eye spot.

13. What is the role of mRNA and tRNA in protein synthesis? 2

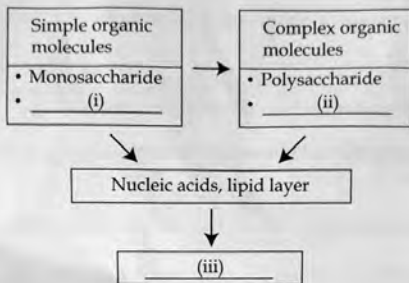
14. Complete the following table appropriately. 2

Symptoms	Causes	Disease
(i)	Production of dopamine in the brain gets reduced	(iii)
Loss of memory and inability to do routine works	(ii)	(iv)

15. We withdraw our hand when accidentally touch on a sharp object.

- (a) What kind of response is mentioned here? 1
- (b) Name two types of such responses. 1

16. An illustration related to chemical evolution is given below. Complete it appropriately. 2



17. Name the secretions which defend pathogens in the following body parts. 2

- (a) Ear (b) Stomach  
(c) Trachea (d) Urinary tract

18. Complete Column B of given table using suitable functions given in the box. 2

A. Plant Hormones	B. Functions
(a) Gibberellin	(i)
(b) Auxin	(ii)
(c) Abscisic acid	(iii)
(d) Abscisic acid and Ethylene	(iv)

- Dropping of leaves and fruits
- Sprouting of leaves
- Fruit Formation
- Dormancy of Embryo

19. Write any two uses of DNA fingerprinting technology. 2

20. Complete the table including the name of endocrine glands and their hormones responsible for the balance of Calcium level in blood. 2

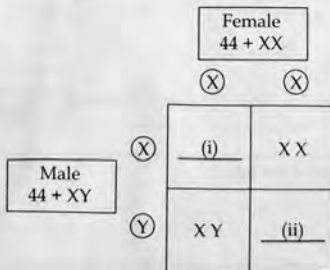
Calcium level in blood	Hormone	Gland
(a) increases	(i)	(ii)
(b) decreases	(iii)	(iv)

21. Observe the picture and answer the questions given below. 2



- Identify the photoreceptor.
- Name the pigment present in this receptor.
- Write the function of this pigment.
- Name the eye defect caused due to the deficiency of this pigment.

22. Analyse the illustration and answer the questions. 2



- Fill up (i) and (ii). 1
- 'The chromosome of the father determines the sex of the child'. Explain. 1

3 scores for each question from 23 to 32.

23. Observe the illustration and answer the questions.



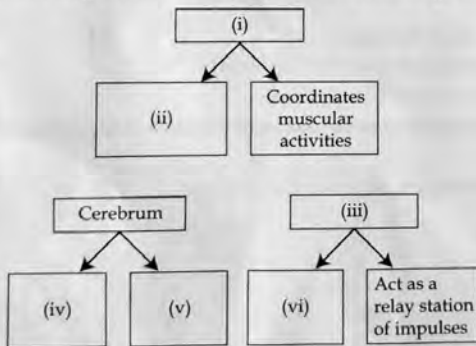
- (a) Identify the illustration. 1  
 (b) What do A and B indicate? 1  
 (c) Name the type of 'B' found only in DNA molecule. 1

24. Read the statement and answer the questions.

'Cancer is caused by the uncontrolled division of cells'.

- (a) What is the reason for uncontrolled division of cells? 1  
 (b) Write any two factors causing cancer. 1  
 (c) Suggest any two measures that reduce the chance for cancer. 1

25. Complete the following illustration using appropriate statements given in the box.



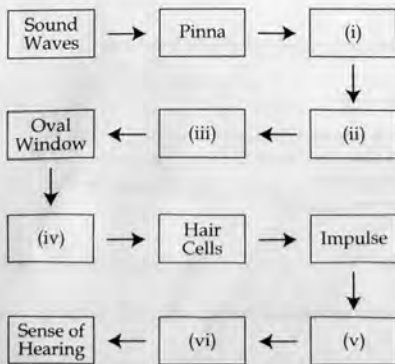
- Maintain equilibrium of the body
- Cerebellum
- Evoke sensation
- Centre of thought, intelligence, memory and imagination
- Thalamus
- Analyses impulses from various parts of the body and sends to the cerebrum

26. Analyse the given table and arrange Column B and C according to Column A.

A	B	C
Acromegaly 1	Increased production of somatotropin during growth phase 2	Overgrowth on the neck 3
Cretinism 2	Excessive production of somatotropin after growth phase 1	Excessive growth of the body 3
Gigantism 3	Decreased production of thyroxine during infancy 2	Overgrowth of bones on the face, jaws and fingers 1
	Excessive production of thyroxine	Physical and mental growth retardation in children 2

27. Complete the flow chart related to hearing by adding missing terms.

3



28. AIDS is a dreadful disease caused by HIV.

(a) Which cells in human body are affected by HIV ?

1

(b) Write any two ways by which HIV transmitted.

2

29. Processes in the sense of sight is given below. Arrange them in sequential order.

3

- Sense of sight
- Lens focus the light rays into the retina.
- Cornea refracts light into the eye.
- Impulse transmit through optic nerve to the cerebrum.
- Photosensory cells on the retina stimulated.
- Light enter through the pupil falls on the lens.

30. Observe the News given below and answer the questions.

The worldwide endeavor to develop a safe and effective Covid-19 vaccine is now bearing fruit

(a) What are vaccines ?

1

(b) Write any two components used in vaccines.

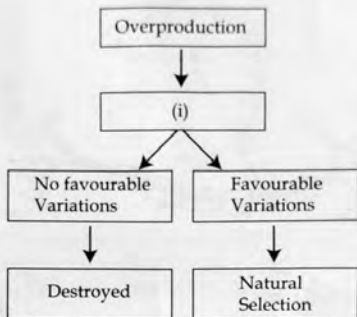
1

(c) Name any two vaccines.

1



31. Analyse the illustration and answer the questions.



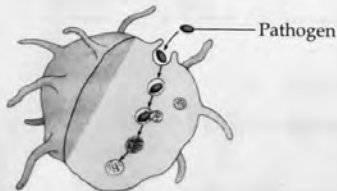
(a) Fill up (i).

1

(b) How Natural Selection leads into the origin of new species ?

2

32. Analyse the illustration and answer the questions given below :



(a) Identify the process illustrated here.

1

(b) Name two white blood cells performing this function.

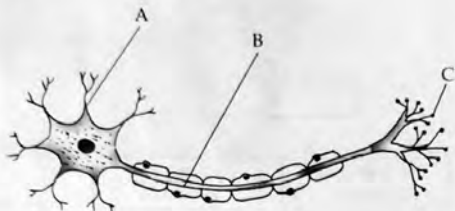
1

(c) What is the importance of this process ?

1

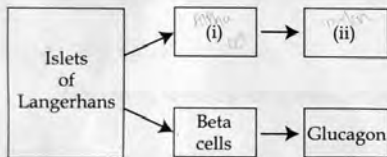
4 scores for each question from 33 to 36.

33. Observe the figure and answer the questions.



- (a) Identify the cell. 1  
 (b) Name the parts labelled A and B. 2  
 (c) Write down the function of C. 1

34. Observe the illustration and answer the questions.



- (a) Identify (i) and (ii). 1  
 (b) Write two functions of (ii). 2  
 (c) Name the condition resulted by the deficiency of (ii). 1

35. 'BCG is the vaccine used against this disease'.

- (a) Which disease is mentioned here? 1  
 (b) How this disease transmit from one person to another? 1  
 (c) Name the bacteria causing this disease. 1  
 (d) Write any two organs affected by this disease. 1

36. Redraw the figure. Identify, name and label the following parts.



Redrawing diagram

- (a) The projected transparent anterior part of sclera.  
 (b) The aperture seen at the centre of the iris. *- lens*  
 (c) The nerve that transmit impulse to the brain.

1

1

1

1

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