# DIET MALAPPURAM & VIJAYABHERI MALAPPURAM
## SSLC MODEL EXAMINATION , MARCH 2022
## SET-2

**Time: 1.45 Hrs.** **Total Score: 40**

## BIOLOGY

## A Section (Focus Area)
## B Section (Non focus Area)

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## PART I

**A. Answer any four questions from 1 to 6. Each carries 1 score**

1. Find the odd one out and write the common features of others
   Mucus, lysozyme, HCl, Monocyte
2. Find the correct pair
   Cerebrum----Homeostasis
   Cerebellum----Voluntary movements
   Medulla oblongata----Involuntary movements
3. The projected transparent anterior part of the sclera
   (Iris, Cornea, Lens, Yellow spot)
4. If there is a mistake in the underlined part of the given statement correct and rewrite it
   i. Plasmids are used to cut and join genes
   ii. The technology of testing the arrangement of nucleotides in DNA is called DNA profiling.
5. Name the nitrogen base which is present only in RNA
6. Observe the illustration and identify the disease

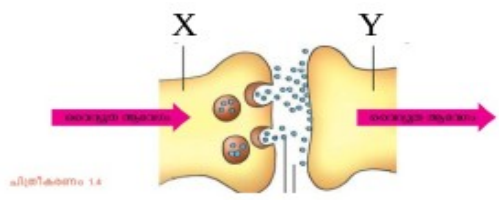

**B. Answer all questions from 7to9. Each carries 1 score**

7. Find the word pair relationship
   Natural selection theory: Charles Darwin
   Mutation theory:_____
8. Observe the illustration and answer the following questions
   (X) Ca+
   Prothrombin---------->Thrombin
   (Y)
   In this X is a vitamin and Y is an enzyme identify and write them
9. Which endocrine gland help in the maturation of T lymphocytes

## PART II

**A. Answer the following question .Carries 2 scores**

10. Observe the diagram and answer the following questions



a) Identify and write X and Y

b) Write the name of chemicals that are formed from X

**B. Answer any one question from 11 to 12. Each carries 2 scores**

11. Make suitable pairs from the given box

| |
|---|
| Homo habilis ,had the ability to stand erect,made weapons from stones and bone pieces,most primitive member of the human race, Homo erectus |

12. Analyse the following pairs and write the relation between them

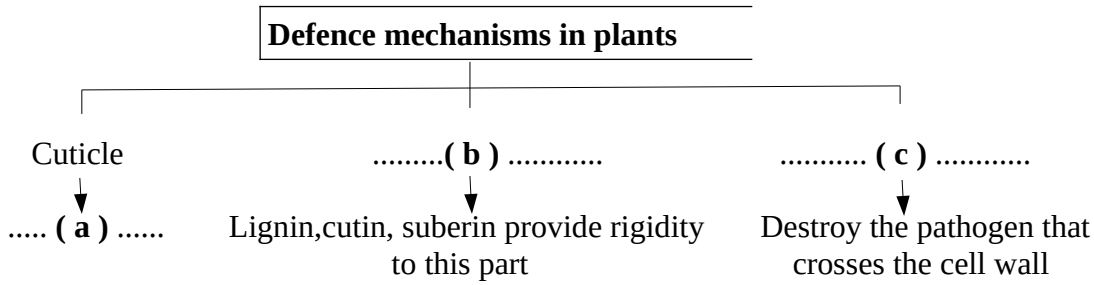
Thyroxine--- Cretinism

Vasopressin---Diabetes insipidus

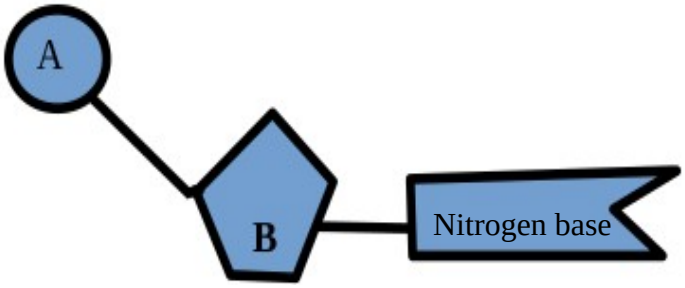
## PART III

**A. Answer any three questions from 13 to 16.Each carries 3 scores**

13. Complete the following diagram which represents the defence mechanism in plants




14. Observe the diagram and answer the following questions




a) What the illustration represent?

b) Identify A and B

c) How the component B differs in DNA and RNA

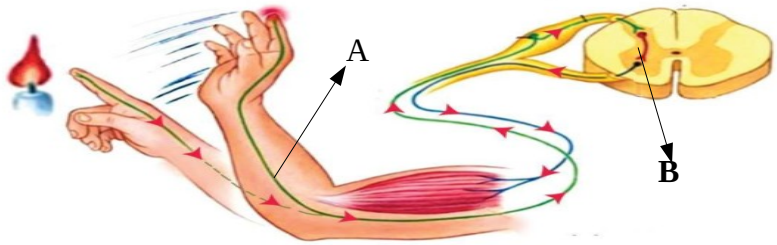
15. Identify the disease and its cause from the indicators given and write it down

1) Loss of memory, inability to recognize friends and relatives

2) Object can not be seen clearly in dim light

3) Number of lymphocytes decreases and reduces the immunity of the body

16. Identify and name the response given in the diagram




a) What are the 2 types of this response?
b) Identify and write down the parts A and B

**B. write down the answer of the following question**

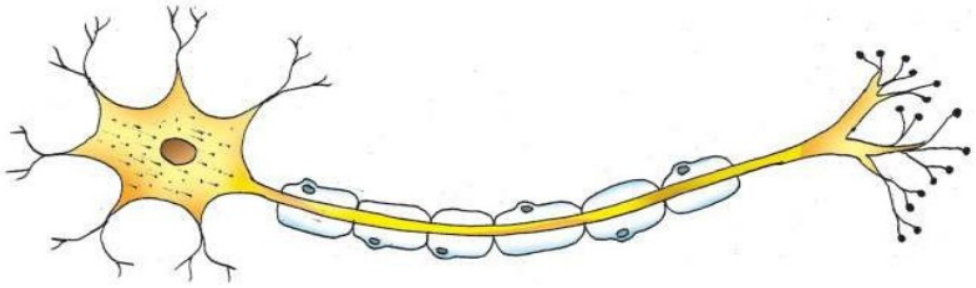
17.Arrange B and C according to column A

| **A**<br>**Gland** | **B**<br>**Hormone** | **C**<br>**Action** |
|---|---|---|
| Thyroid gland | Epinephrin | Stimulate the production of tropic hormones |
| Adrenal gland | Releasing hormone | Maintain the rhythm of daily activities |
| Hypothalamus | Calcitonin | Stores the excess calcium in bones |
| | Thymosin | Acts along with the sympathetic nervous system |

**PART IV**

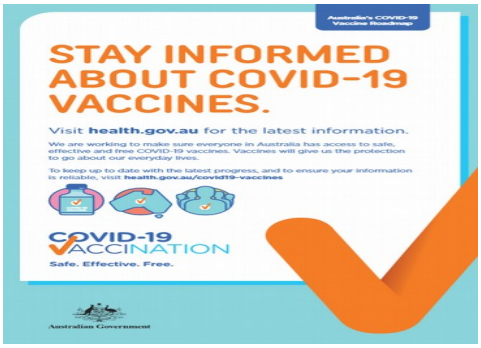
**A. Answer any two question from 18 to 20.Each carries 4 scores**

18. Redraw the diagram of neuron and label the parts according to the indicators



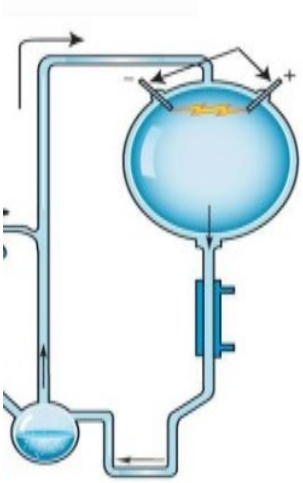
a) Carries impulses from dendrites to the cell body
b) Carries impulses from the cell body to outside
c) Secrete neurotransmitter

19. Observe the poster and answer the questions




1)What are vaccines?
2)Which are the components used in vaccine?
3)How vaccines help in defence mechanism

20. Observe the figure and answer the questions



a) This experiment helped to prove which theory ?
b) Who are the scientists who performed this experiment?
c) Name the organic molecule formed after the chemical reaction in this experiment.
d) What are the conclusions reached through this experiment?

**B. Answer any one question from 21 to 22. (4 score)**

21.List the following activities as sympathetic and parasympathetic

Production of hormone increases, Urinary bladder contracts, Glucose is converted to glycogen, Production of saliva decreases, Trachea contracts, Gastric activities slow down, Pupil dilates, Production of saliva increases

| sympathetic | parasympathetic |
|---|---|
| • | • |
| • | • |
| • | • |
| • | • |

22. There are some similarities between the bacterial cell and human cell in terms of cell structure and biological properties, these provide strong evidence for evolution. Substantiate this statement

## PART V

**A. Answer any one question from 23 to 24. Each carries 5 scores**

23. Arrange the stages of protein synthesis in the form of a flowchart

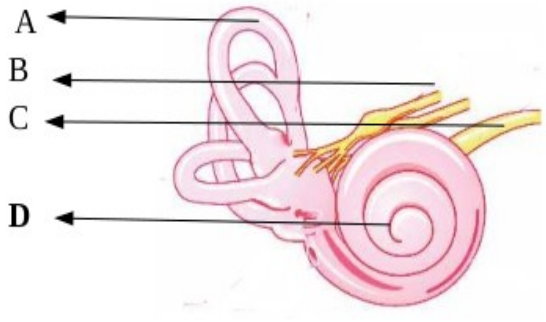
**i)**

- t RNA brings different kinds of amino acids to ribosome
- m RNA reaches outside the nucleus
- m RNA forms from DNA
- based on the information in m RNA amino acids are added
- m RNA reaches ribosome
- protein is synthesized

**ii)** Where are the genes located in the chromosomes?

**iii)** Write any two differences between DNA and RNA?

24. The picture of the internal ear is given




i) Write the name and functions of A,B,C,D

ii) Name the part of internal ear in which basilar membrane and sensory hair cells seen together