



**DIET MALAPPURAM & VIJAYABHERI MALAPPURAM  
SSLC MODEL EXAMINATION , MARCH 2022**



**SET-1**

**Time:1.45 Hrs.**

**Total Score: 40**

**BIOLOGY**

**A Section (Focus Area)**

**B Section (Non focus Area)**

**PART I**

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

1. Identify the odd one. Write the common feature of others.  
Tympanum, Malleus, Cornea, Incus
2. Identify the word pair relationship and fill in the blanks.  
Genetic scissors : Restriction endonuclease  
Genetic glue : -----
3. Select the right statements given below.
  - A. Oparin and Haldane are the proponents of chemical evolution theory.
  - B. Protein and polysaccharide are the simple organic molecules formed as a result of chemical evolution.
  - C. Stanley Miller and Harold Urey are the proponents of chemical evolution theory.
  - D. There was no free oxygen in primitive earth.
    - i) B and C are correct
    - ii) A and B are correct.
    - iii) A and D are correct.
    - iv) B and D are correct.
4. Fill in the blanks by analysing the table.

Body part	Body fluid
Mouth	Lysozyme in saliva
Trachea	..... ( a ) .....
Stomach	.....( b ).....

5. Make the correct word pair by analysing the information given in the boxes **A** and **B**.

Auxin Gibberellin Ethylene
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A

Cell differentiation Dormancy of embryo Breakdown of stored food
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B

6. The part which connects the middle ear with Pharynx balances the pressure on either side of the tympanum. Write the name of this part.

**A. Answer all questions from 7 to 9. Each carries 1 score.**

7. From those given below identify the hormone that is not produced by the adrenal gland.

*Aldosterone, Epinephrine, Cortisol, Vasopressin.*

8. Fill in the blanks by analysing the table.

Pathogen	How the cells are affected	Remedy
Fungus	Producing toxins	Antifungal medicines
Virus	..... ( a ) .....	Antiviral medicines
Bacteria	..... ( b ) .....	Antibiotics

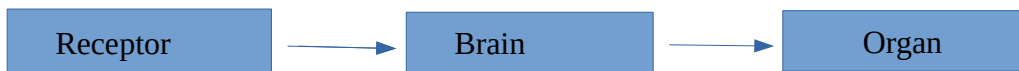
9. Which of the following activities take place under the control of the parasympathetic system.

*Urinary bladder contracts, glycogen is converted in to glucose, Gastric activities slow down, production of saliva increases.*

**PART II**

**A. Answer the following questions. Carrying 2 scores.**

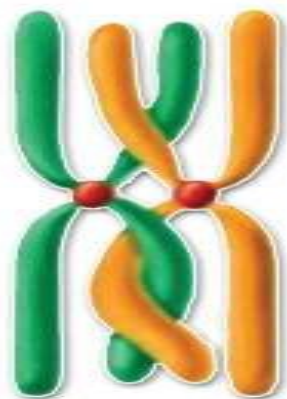
10. Observe the illustration on impulse transmission through nerves and answer the questions.



- a) What kind of nerves do X and Y indicate.
- b) What is the significance of synapse in impulse transmission.

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

11. Analyse the illustration and answer the questions



- a) Which is the process illustrated above.
- b) Write the role of this process in causing variations in organisms.

12. Identify and write the parts X and Y in the flow chart related to inflammatory response.



### PART III

#### A. Answer any three questions from 13 to 16. Each Carries 3 scores.

13. Opinion of 3 students during a discussion on fever are given below.

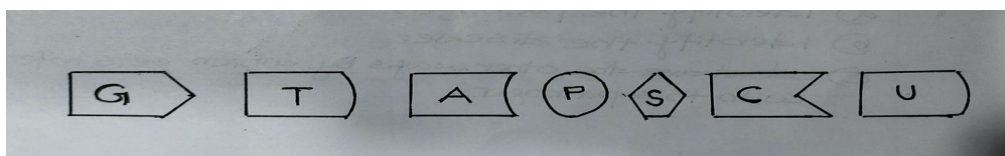
Student 1 : fever can cured through self medication

Student 2 : fever should be treated by finding out the real cause.

Student 3 : fever need not be treated at all.

- To which opinion do you agree with. Write justification.
- How does fever become a defence mechanism of the body?

14. The components of nucleotide are given below. Answer the questions through illustrations using these components.



- Illustrate the nucleotide which is found only in RNA.
- Illustrate the nucleotide which is found only in DNA.

15. Some statements which are related to one pathogen are given below.

- Included in the Virus category.
  - Transmitted through body fluids.
  - They enters the body and multiplies using the genetic mechanism of lymphocytes.
- Name the virus mentioned above.
  - Identify the disease.
  - What are the other ways of transmission of this disease.

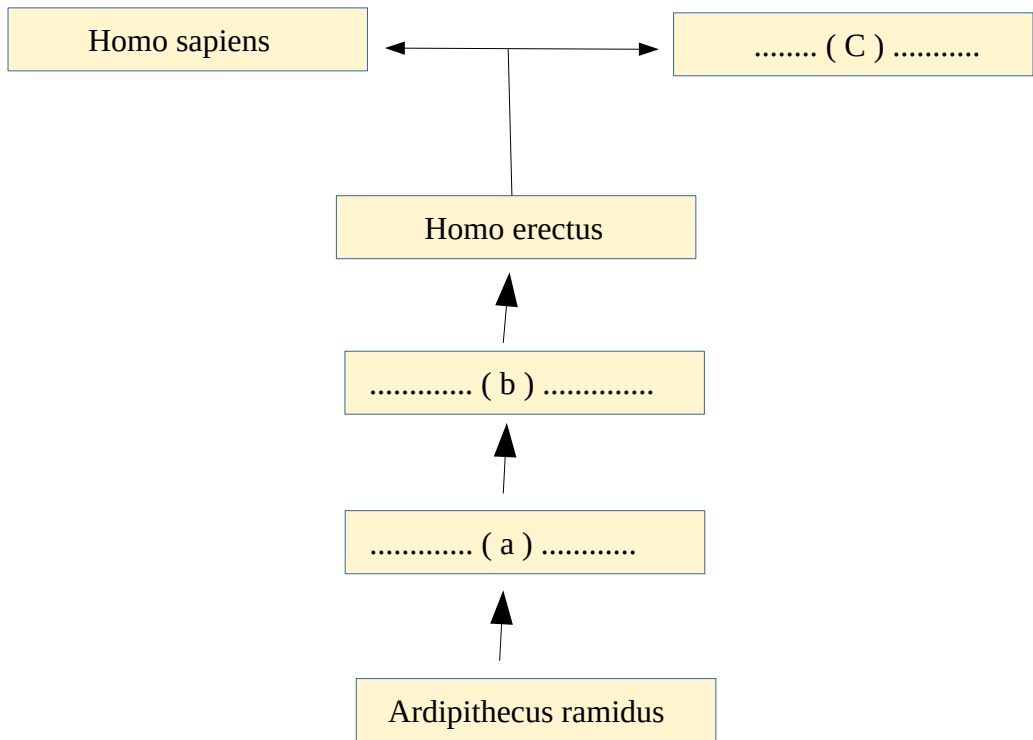
16. Vision is enabled when the impulse from the retina reaches the cerebrum through the optic nerve

- Draw a flow chart showing the pathway of light from cornea to retina.
- There is no vision at the point where the optic nerve starts. why?

#### B. Write down the answer of the following question. 3 score

17. The links in the evolutionary history of modern man are given in the box. complete the illustration choosing the appropriate ones from the box.

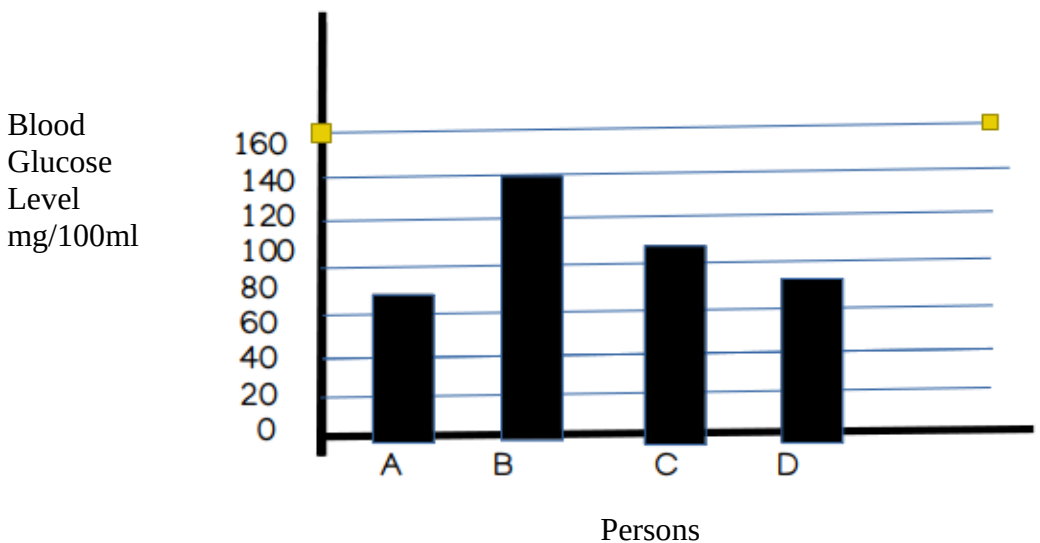
*Homo habilis, Australopithecus afarensis, Ardipithecus ramidus, Homo erectus, Homo neanderthalensis, Homo sapiens*



**PART IV**

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

18. Examine the graph indicating the blood glucose level of different persons before breakfast



- a) Which person is affected by diabetes?
- b) Who have normal level of glucose in blood?
- c) Write two actions of insulin to prevent the rise in the level of glucose in blood.

19. Read the news report given below and answer the following questions

**The deadbodies identified through DNA test**  
*Malappuram: The deadbodies of the deceased in the landslide disaster occurred last month handed over to the relatives after identifying them through DNA test*

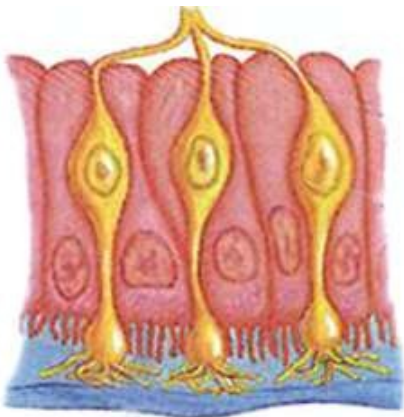
- a) What is the basis of DNA test?
  - b) How is possible to identify relations through DNA test ?
  - c) Write two other possibilities of this technology.
20. Observe the table related with blood groups

Blood groups	Antigen	Antibody
A	A	b
B	..... X .....	a
AB	A and B	nil
O	nil	..... Y .....

- a) Identify and write ‘X’ and ‘Y’
- b) What is the basis of grouping blood as + ve and - ve ?
- c) Every one cannot receive blood from all blood groups why ?

**B. Answer any one question from 21 to 22. Each carries 4 scores .**

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



- a) Which is the receptor given in the figure ?
- b) Which sense organ is this receptor seen in ?
- c) What is the function of this receptor ?
- d) Write the function of mucus seen associated with this receptor.

22. Complete the illustration of the second generation obtained from the hybridization in which two traits of a plant are considered.

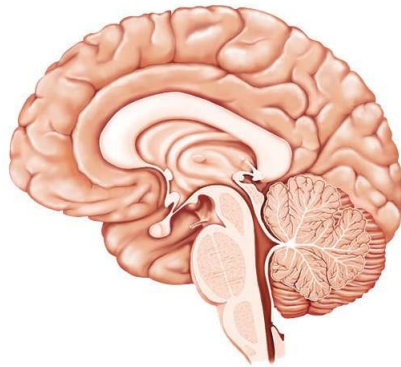
**Indicators**  
*Dominant character: Tallness, Red colour of flower*  
*Recessive character: Dwarfness, White colour of flower.*

	TR	Tr	tR	tr
TR	TTRR	..... <b>A</b> .....	TtRR	..... <b>B</b> .....
Tr	..... <b>C</b> .....	TTRr	..... <b>D</b> .....	Ttrr
tR	TtRR	..... <b>E</b> .....	..... <b>F</b> .....	..... <b>G</b> .....
tr	..... <b>H</b> .....	Ttrr	ttRr	ttrr

**PART V**

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

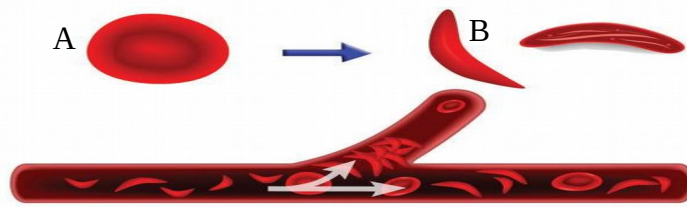
23. Redraw the diagram given below and answer the questions.



Thalamus, Controls heartbeat, Medulla oblongata,  
 Cerebellum, Makes sensation, Cerebrum  
 Coordinates muscular activities, Act as relay station of impulses

- a) Identify the words which are related to brain and label them.
- b) Make suitable word pairs of parts of brain and their functions given in the box.

24. Observe the illustration and answer the questions given below.



- a) Which disease is indicated by figure B?
- b) What change occurred in the structure of RBC?
- c) What is the reason for this disease?
- d) How does the deformity of RBC in sickle cell anaemia patients affect their body?