

Summative Assessment - III - 2025 - 2026
(Model question paper)

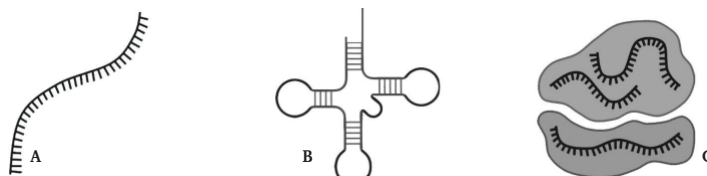
Class: X

BIOLOGY**Score: 40****Time: 1 ½ hrs****Instructions:**

1. First 15 minutes is given as cool off time. You may use this time to read the questions and plan your answers.
2. Read the questions carefully and answer the questions.
3. Keep in mind the score and time while answering the questions.
4. Choices are given for questions 6, 8, 10, 14 and 17.

Answer questions 1 to 4. Each carries 1 score. (4x1=4)

1. Observe the illustration of different RNAs and choose the correctly labelled option. 1



- a) A- tRNA, B- mRNA, C- rRNA
 b) A- mRNA, B- rRNA, C- tRNA
 c) A- mRNA, B- tRNA, C- rRNA
 d) A- rRNA, B- tRNA, C- mRNA

2. Which cells form the myelin sheath? 1

- i) Oligodendrocyte ii) Microglial cell
 iii) Astrocyte iv) Schwann cell

3. Match the information in Column A with the information in Column B and choose the correct one. 1

A. Organism	B. sensory mechanisms
P) Insects	i) Jacobson's organ
Q) Snake	ii) Eye spot
R) Euglena	Iii) Echo location
	iv) Ommatidia

- a) P-ii, Q- iii, R - iv b) P-iv, Q- i, R- ii
 c) P-iii, Q- iv, R- i d) P-iv, Q-ii, R- iii

4. Which are the parts of the vestibular system?

1

- a) Semicircular canals, vestibule, cochlea
- b) Cochlea, vestibule, hair cells
- c) Semicircular canals, vestibule, hair cells
- d) Vestibule, semicircular canals, basilar membrane

Answer questions 5 to 9. Each carries 2 score. (5x2=10))

5. An illustration of a stage in the process of protein synthesis within a cell is given. Observe it and answer the questions



a) Identify and name the stage of the protein synthesis.

1

b) What is the role of the molecule labelled as X, in protein synthesis?

1

6A. Give reason.

2

- a) Colour blindness affects males more frequently.
- b) Cone cells provide colour vision..

OR

6 B. Analyse the statements about the two fluids in the eye and answer the questions.

A. Watery fluid

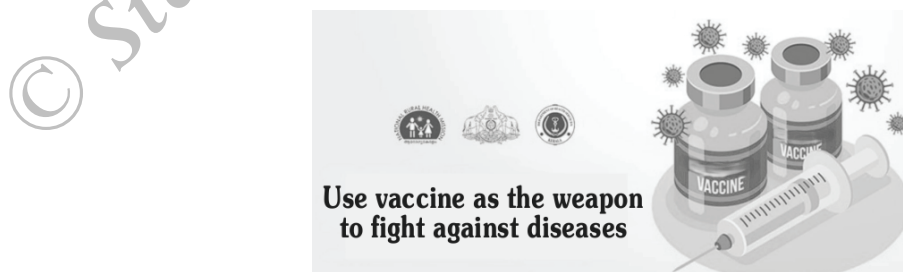
B. Jelly-like fluid

- a) Identify and write the names of fluids A and B.
- b) What are the functions of each of these fluids?

1

1

7. Observe the poster displayed at the primary health centre and answer the question.



How does a vaccine become a weapon to fight against diseases?

2

8A. Analyse the given indicators about a disease and answer the questions:

- Mosquito-borne disease
- The affected part of the body swells

- a) Name the disease. Which mosquito spreads it? 1
- b) Why does the affected part of the body swell? 1

OR

8B. Analyse the given statement about a disease and answer the questions.

A condition in which cells multiply through abnormal and uncontrolled cell division and spread to other parts of the body.

- a) How does this disease spread to other parts of the body? 1
- b) What are the causes of this disease? 1

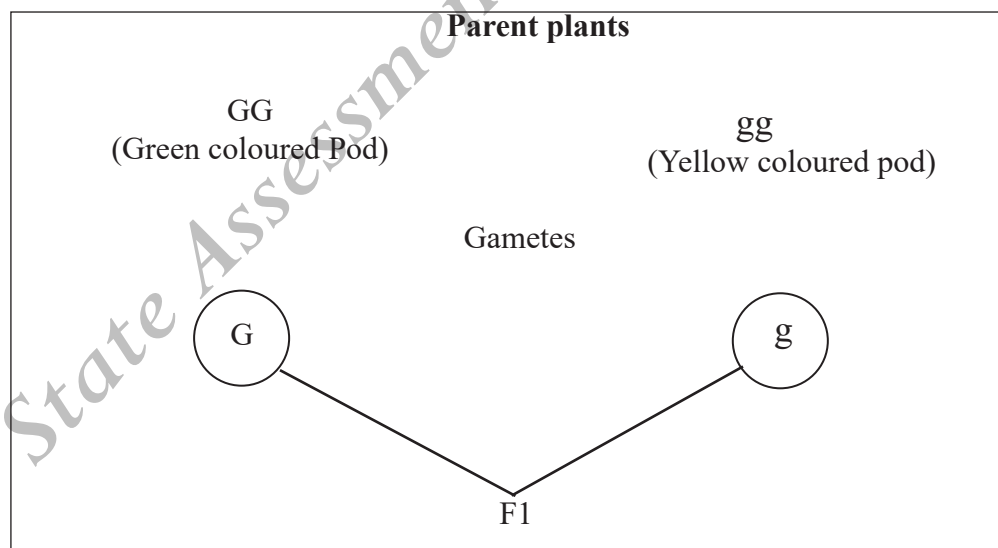
9. Answer the questions by analysing the given statement.

DNA fingerprinting is a technology used to identify individuals by analyzing the arrangement of nucleotides.

- a) How can individuals be identified using DNA fingerprinting technology? 1
- b) Write other two uses of this technology. 1

Answer questions 10 to 15. Each carries 3 score. (6 x3=18)

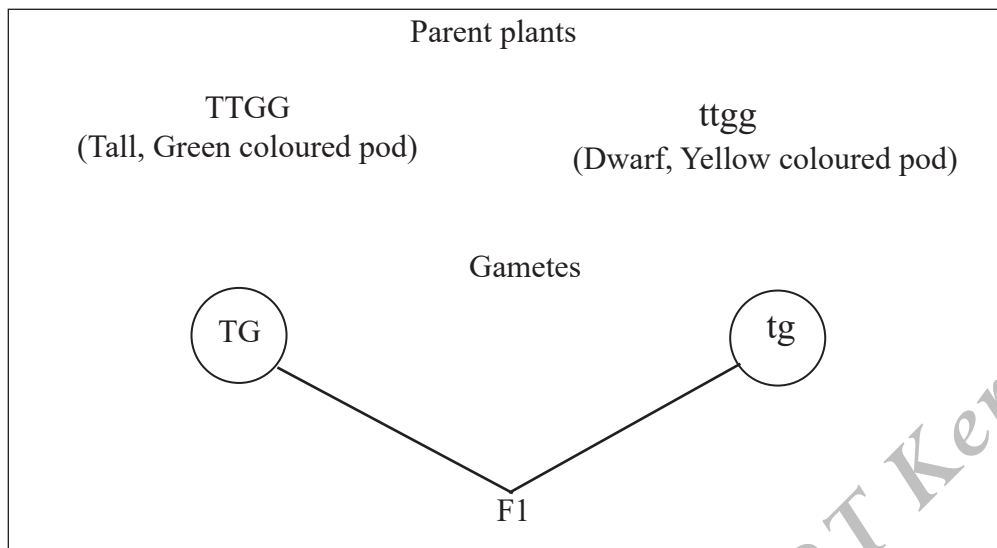
10A. Observe the illustration of a monohybrid cross conducted by Gregor Mendel and answer the questions



- a) Write the phenotype and genotype of F1. 1
- b) Illustrate the self-pollination of F1. 2

OR

- 10 B. Observe the dihybrid cross conducted based on the height of the pea plant and the colour of the pod, and answer the questions.



- a) Write the phenotype and genotype of F1. 1
- b) When the F1 generation is self-pollinated, what new traits are produced in the F2 generation that are different from the parent plants?? 1
- c) What is the reason for the appearance of new traits in the F2 generation? 1

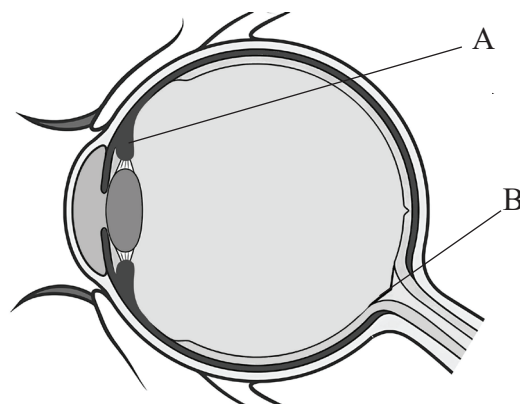
11. Analyse the given statement and answer the questions.

Variation leads to speciation.

- a) What is speciation? ? 1
- b) What are the causes of variation? 1
- c) How does variation lead to speciation? 1

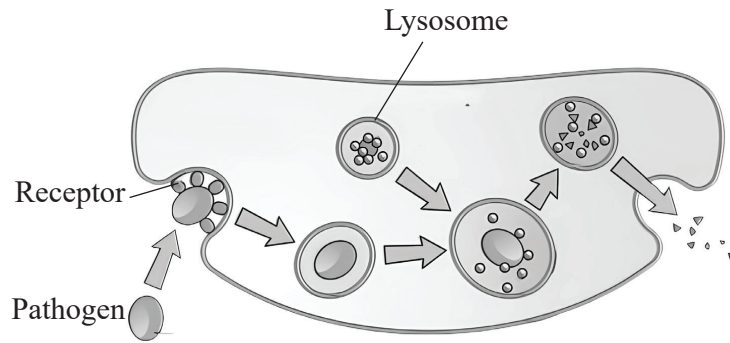
12. Redraw the diagram of Eye and answer the questions.

For redrawing the diagram 1



- a) Name the parts A and B. 1
- b) How does the part A regulate the curvature of the lens when looking at nearby objects? 1

13. Observe the illustration and answer the questions.



- a) Which process is indicated in the illustration? 1
- b) Illustrate the steps of this process in the form of a flowchart. 2

14 A. Evaluate the statements related to a hormone and answer the questions.

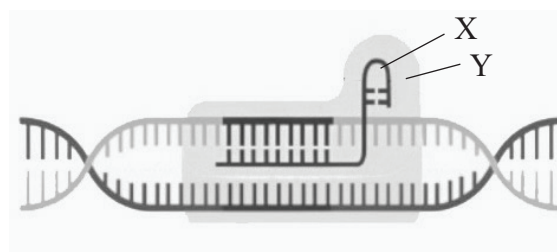
- Stored in the posterior lobe of the pituitary gland
 - Helps to maintain water balance in the body
- a) Which hormone is mentioned here? Which gland produces it?
 - b) How does this hormone maintain water balance in the body during summer and winter?
- 2

OR

14 B. Evaluate the statements related to hormonal disorders and answer the questions..

- Related to growth hormone.
 - Occurs during the growth period.
- a) Name the hormonal disorders mentioned here? 1
 - b) Write the cause and symptoms of each 2

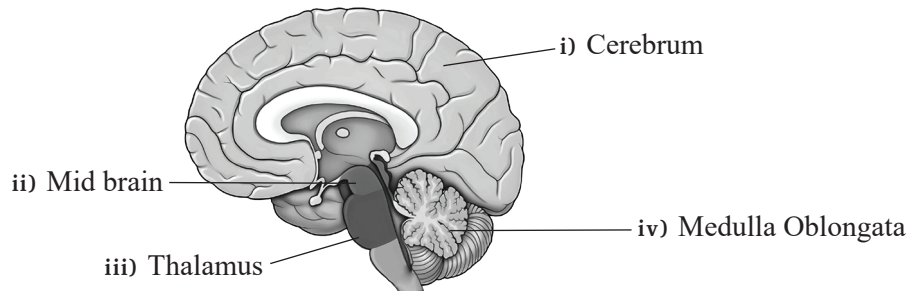
15. Observe the illustration of the main stage of a technology and answer the questions.



- a) Stage of which technology is indicated here? 1
- b) Which part is indicated as X? Which stage uses it? 1
- c) Which part is indicated as Y? What is its function? 1

Answer questions 16 and 17. Each carries 4 score. (2 x4=8)

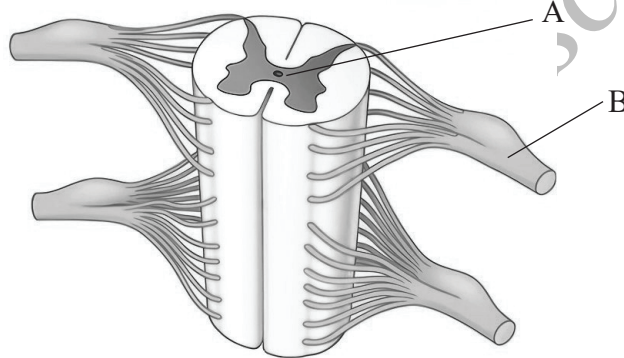
16 A. Observe the illustration and answer the questions. (No need to draw the figure)



- If there is any mistake in the labelling, correct it and write it down.. 1
- Write the functions of the corrected parts. 2
- How is the brain protected? 1

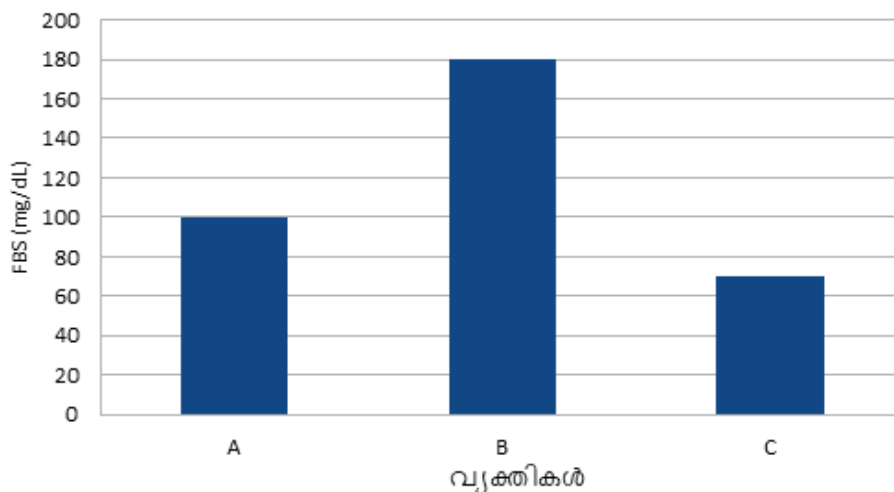
OR

16 B. Observe the illustration and answer the questions. (No need to draw the figure)



- Name the parts A and B. 1
- Identify the fluid in the part labelled as A? What is its function? 1
- How is part B formed? What is its function? 2

17. The graph showing the FBS (Fasting Blood Sugar) levels of three individuals is given. Analyse it and answer the questions.



- a) Which person has diabetes? How can it be identified through graph analysis? 1
- b) Further testing revealed that this patient has type 1 diabetes. What does this mean? (Reason) 1
- c) What is the reason for the increase in type 2 diabetes in children? 1
- d) Write any two consequences that can occur if diabetes is not controlled. 1

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