

**DEPARTMENT OF GENERAL EDUCATION**  
**DIET ERNAKULAM**  
VAIBHAVAM 2021  
SSLC- ACADEMIC SUPPORT

TIME :45 MINUTES

T-26

**BIOLOGY – TEST -III**  
(UNIT – 6,7,8)

SCORE : 20

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**INSTRUCTIONS :**

Total score is 30. Answer only 20 mark questions

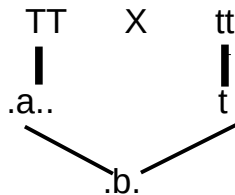
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Questions 1 to 5 carries 1 score each

1. Fill in the blanks identifying the relationship of the given pair :

DNA : Thymine ; RNA : .....

2. The complete genetic material of an organism is called .....

3. Complete the illustration ( fill up a and b)



4. Find out the correct pair from the given below.

- ◆ Junk genes -- Functional genes
- ◆ Interphrons -- Genetic scissors
- ◆ Ligase -- Genetic glue
- ◆ Endorphin -- The protien used to avoid growth disorders

5. Name the biomolecules that formed in Urey-Miller experiment  
( Protein , Fatty acid ,Amino acid , Glucose )

Questions 6 – 9 carries 2 score each

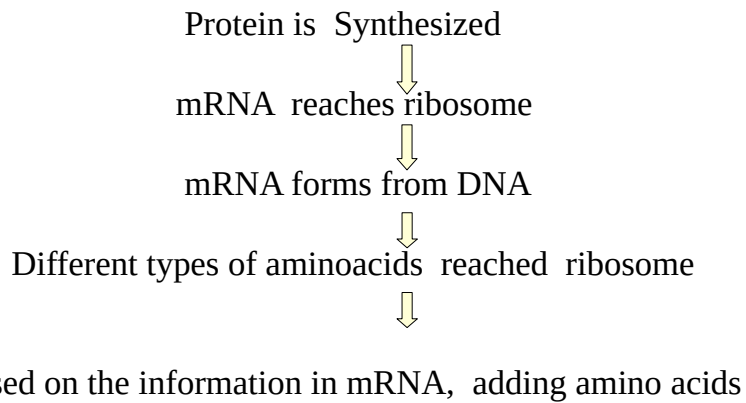
6. Define the terms given below

- \* Junk gene
- \* Vectors

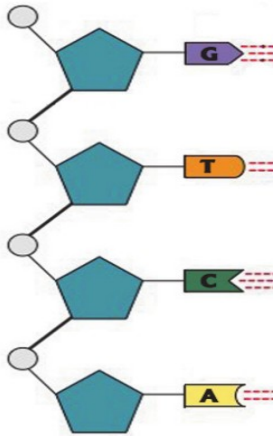
7.“ Gene therapy – A hope in curing genetic diseases “

- (a). Do you agree with the statement given above ?
- (b). What is gene therapy ?

8. Rearrange and write the flow chart related to **protein synthesis**.

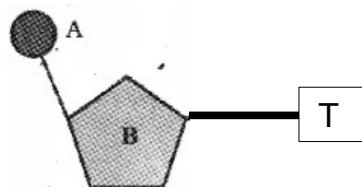


9. Complete the illustration given below.



Questions 10 – 12 carries 3 score each

10. Analyse the illustration of a nucleotide molecule and answer the questions

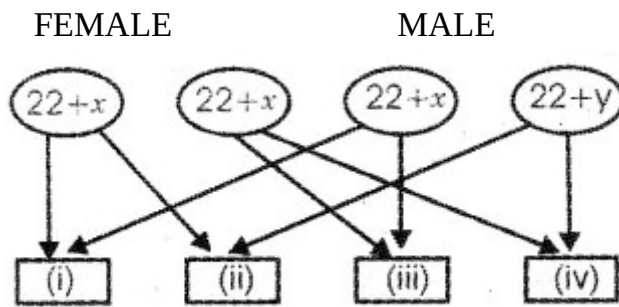


a) Identify A and B in the illustration

b) 'Nucleotides are found in DNA alone'. What is your opinion regarding these statements?

c) What change will be seen in the given nucleotide in RNA ?

11. Given below is the illustration showing how sex determination is taking place in man.



- Observe the illustration and examine the 4 types of possible offsprings. Specify their sex chromosomes
- What are the inferences you arrive at from this illustration?
- Which are the sex determining chromosome in man?

12. Arrange the different factors related to the origin of life suitably in the table using the items given below

[ Amino acid, Hydrogen sulphide, Protein, Methane, Lipid, Monosaccharide ]

Atmosphere of primitive earth	Simple organic molecules	Complex organic molecules

Questions 13 – 14 carries 4 score each

13. Observe the given table and make suitable pairs

(A) DNA profiling	(I) Treatment of genetic diseases.
(B) Gene mapping	(II) The technology of testing the arrangement of nucleotides
(C) Gene therapy	(III) The complete genetic material present in an organism
(D) Genome	(IV) The technology helped to identify the location of a gene in the DNA

14. Observe the newspaper report and answer the questions given below

**Suma murder case : Hair collected from the murder location helped to identify the culprit**

- Which technology is used to identify the culprit ?
- Name the scientist who discovered this technology
- Write down two other benefits of this technology