



Date: 6-12-2024

LGS GROUP OF COLLEGES

Biology

Monthly Test

XII

TEST#

MT-3

Subject: Biology	Name:.....	Roll No:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Time: 60 mins	Objective	Marks =35					

SECTION-I OBJECTIVE TYPE

Note: Four possible answer A, B, C and D to each question are given. The choice which you think is correct, fill the circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question. (1 × 11 = 11)

Q1. Select the right option.

- Human genome is _____ times larger than any other genome sequenced so far.
 - 22
 - 19
 - 25
 - 23
- Lambda phage:
 - Replacing
 - Replication
 - Slicing of DNA
 - Attaches to a host
- Antibiotic resistance genes for tetracycline and ampicillin:
 - PSC 101
 - P BR 322
 - P UC 19
 - F factor
- Palindromic sequences:
 - Bind by supplementary base pair
 - 20 nucleotides
 - Cuts double stranded DNA
 - Four or six nucleotides
- Eco R1:
 - Four or six
 - An expression system
 - Bind by supplementary base pair
 - Cuts double stranded DNA
- Human chromosome no. 22 is
 - A restriction enzyme cuts DNA
 - Largest chromosome
 - Viruses
 - Smallest chromosome
- Dideoxyribo nucleoside triphosphate:
 - Sanger's method
 - To terminate DNA synthesis at different sites
 - Maxma-gilbert method
 - Both 'A' and 'B'
- PcR amplification and analysis can be used
 - In foreshenic laboratory
 - To diagnose evolutionary history
 - To diagnose viral diseases
 - All of these
- Which of the following is used to transfer genes?
 - Molecular sissor
 - Expression system
 - Molecular vector
 - None of the above
- Genes are cut by:
 - Gene of interest
 - Molecular vector
 - Expression system
 - Endonucleases
- The number of restriction enzymes discovered so far
 - 40
 - 400
 - 20
 - 4000



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SECTION-II SUBJECTIVE TYPE

Q2. Short questions.

(8 x 2 = 16)

- i) How is bacterial wall made more permeable for transfer of plasmids?
- ii) What are the possible ways to get the gene of interest?
- iii) What are sticky ends?
- iv) Write the first goal to construct a genetic map of human genome.
- v) How can the evolutionary history be determined by DNA analysis?
- vi) What are restriction endonucleases? Give example.
- vii) What is gel electrophoresis?
- viii) Write down the methods for generation of different sized DNA fragments during gene sequencing.

SECTION – II (PART–II)

Note: Long question.

(4 + 4 = 8)

- Q3.** a) What is PCR? How is it carried out to produce multiple copies of a DNA segment?
- b) What is recombinant DNA? Explain the expression of recombinant by figure.