Subject Code: KBT501

PAPER ID-310111

Roll No:

BTECH
(SEM V) THEORY EXAMINATION 2024-25
GENETIC ENGINEERING

TIME: 3 HRS **M.MARKS: 100**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

Qno.	Question	Marks	CO
a.	What is function of *dam*methylase enzyme?	2	
b.	Differentiate between adaptor and linker.	2	
c.	Classify the restriction enzyme with suitable example.	2	
d.	Describe molecular beacons with appropriate drawing.	2	
e.	Name any onetissue specific, inducible and repressible vector along with their promoter.	2	
f.	Explain Nested and Hot start PCR.	2	
g.	How AFLP is differing from RFLP?	2	
h.	Comment on nuclear receptor.	2	
i.	Write four commercially produced recombinant products.	2	
j.	How Gene therapy is useful in treating genetic disease? Give example.	2	

SECTION B

2. Attempt any *three* of the following:

a.	Explain various methods used to introduce recombinant DNA into host cell.	10	
b.	Differentiate the making, function and use of c DNA and genomic libraries.	10	
c.	Write notes on DNA sequencing methods.	10	
d.	Shed light on creation of Dolly with suitable drawing.	10	
e.	Unite your thoughts on cellsignaling.	10	

SECTION C

3. Attempt any *one* part of the following:

a.	Describe different methods used to select recombinant DNA of interest.	10	
b.	Explain the structural feature of BACS and YACS along with their uses.	10	

4. Attempt any *one* part of the following:

a.	How you will improve streptokinase producing bacterial strain by using diverse methods?	10	
b.	How many clones are required to achieve 99% probability of including a sequence using cosmidvector?	10	

5. Attempt any *one* part of the following:

a.	Describe the methodology of RAPD.	10	
b.	How site directed mutagenesis is helpful in genetic engineering? Explain with suitable example.	10	

6. Attempt any *one* part of the following:

a.	Clarify the ethical issues in development of human clone.	10	
b.	How therapeutic differs from reproductivecloning?	10	

7. Attempt any *one* part of the following:

a.	Have discussion on G protein coupled receptor?	10	
b.	Comment on GTpase. How extracellular signaling is different from intracellular signaling?	10	

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