VCD/130423CLASS: FYBT SEM II SUB- PAPER 1 Fundamentals of Biotechnology-II

2 ½ Hours

Total Marks: 75

NOTE:

1. Attempt **all** questions.
2. **All questions** carry **equal** marks.
3. Draw **neat labeled diagrams** wherever necessary.
4. For **Q 2, Q 3 and Q 4** attempt A and B **OR** C and D.

Q 1 Do as directed (Any fifteen) 15

1. _____is one of the oldest practiced biotechnology processes.
   (Fuel ethanol production, Beer and wine production, Antibiotic production, Enzyme production)
2. Give an example of fermented food product of indigenous origin.
3. What is putrefaction?
4. State true or false. Fungus requires more moisture than bacteria to grow.
5. Vinegar is made up of _____.
   (Formic acid, Acetic acid, Propionic acid, Glycerol)
6. Name any method of food preservation.
7. Give full form of the abbreviation HACCP.
8. State True or False: Unipotent stem cells can only produce cells of one kind, which is their own type.
9. Give any one example of killed vaccine
10. Give any one use of monoclonal antibodies.
11. Give any one application of stem cells.
12. Name any one type of cells which can be used in tissue cultures for the production of viral vaccines
13. Give any one example which can be used as a vector for recombinant vector vaccines
14. What does "E" stand for in EcoRI?
15. The enzyme _____ removes the phosphate moiety at the 5'-end of a DNA strand. (alkaline phosphatase, DNA polymerase, Polynucleotide Kinase, DNase I)
16. What are the different requirements needed for Type I endonucleases activity?

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17. What do you mean by vector?

18. The _____ is a process by which bacterial DNA fragments are introduced via natural bacteriophage vectors that infect the bacterial strain.
(Transformation, Transduction, Transposition, Conjugation)

19. Give one example of bacteria used as a Host cell in cloning.

20. Which restriction enzyme gives 3'-OH ended tails after digestion?

Q 2 A	What are the criteria for the assurance of fitness or unfitness of food for consumption	**08**
Q 2 B	Diagrammatically explain the quick method or the trickle method of vinegar production.	**07**
	OR	
Q 2 C	Give an account of classification of food by ease of spoilage.	**08**
Q 2 D	How would you prepare sauerkraut in the laboratory and which parameters would you check for its quality.	**07**
Q 3 A	Give a brief account on live ,attenuated vaccines and killed vaccines	**08**
Q 3 B	Describe monoclonal antibody preparation in brief and add a note on its applications	**07**
	OR	
Q 3 C	Give a brief account on virus vaccine production.	**08**
Q 3 D	Describe the type of stem cells and their significance in brief.	**07**
Q 4 A	What is the plasmid? Discuss the essential features of plasmid vectors.	**08**
Q 4 B	Explain the construction of recombinant DNA with the help of a diagram.	**07**
	OR	
Q 4 C	Discuss different Natural Parasexual Models of Gene Transfer in prokaryotes.	**08**
Q 4 D	Give a detailed note on microinjection and electroporation techniques.	**07**
Q 5	**Write a short note on any three of the following.**	**15**
a	Leavening	
b	Unit operations	
c	Toxoids	
d	Blue and white screening	
e	Conjugate vaccines	

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