MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD

SEMESTER END THEORY EXAMINATION

B.Tech. (Food Technology)

Semester	:	I (New)	[ICAR - Sixth Deans' Committee Syllabus]		Acad. Year	:	2025-26
Course No.	:	FQA-112					
Credit Hrs.	:	3(2+1)	Title	: General Microbiology			
Day, Date	:	Thursday, 12.02.2026	Time	: 10:00 to 12:00 hrs.	Total Marks	:	40

Note: Draw neat diagram wherever necessary

SECTION 'A' : Questions with Descriptive Long Answers (Any 4) **Marks**

Q.1 Enlist the methods of preservation of culture and explain in detail lyophilization method. 6

Q.2 What are chemical agents used to control of micro-organisms? Explain any three of them. 6

Q.3 Write in detail about compound microscope with neat labelled diagram. 6

Q.4 a) Explain the bacterial recombination by conjugation process. 3

b) Draw the growth cure and explain the phages of bacteria. 3

Q.5 a) How does the DNA replication work? 4

b) Write the functions of mitochondria. 2

Q.6 a) Explain in detail Polymerase Chain Reaction. 4

b) Illustrate the staining method and explain the principle of Gram staining method. 2

SECTION 'B' : Questions with Descriptive Short Answers (Any 4)

Q.7 Explain the Prokaryotic cell. 2

Q.8 Draw the structure of bacterial cell. 2

Q.9 Explain the role of micro-organisms in ecosystem and human health. 2

Q.10 Enlist the methods of isolation of pure culture. 2

Q.11 Explain the scope of Microbiology in different sectors. 2

SECTION 'C' : Objective-type Compulsory Questions

Q.12 Do as directed: 4

1) Define: Mutation.

2) Write the types of RNA.

3) Spell-out: AFMs.

4) The Flagellum is made up of _____.

(P.T.O.)

Q.13 Match the pairs:

'A'	'B'
1) Immune system c	a) Antisepsis
2) Edward Jenner d	b) Scanning Force Microscopy
3) Replicate independently g	c) Natural defence system
4) Atomic Force Microscopy b	d) Vaccination
5) Louis Pasteur d	e) Continuous culture
6) Joseph Lister a	f) Gram staining
7) Perfusion h	g) Plasmid
8) Han Christian Gram f	h) Pasteurization

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