

BIO TECHNOLOGY

Academic year 2023-2024 (Even Sem)

Date	19 th June 2024	Maximum Marks	50
Course Code	BT242AT	Duration	90 min
Sem	IV Semester	Closed Book Offline Test-1	
Bio Safety Standards and Ethics (Basket course)			

Sl. No	Questions (Test)	M	BT-L	CO
1.	Elaborate on various types of bio hazards, what are the consequences of biohazards if not handle properly?	10 10	3	1
2.	List out and discuss about different biosafety levels with a neat triangular diagram.	10 10	2	1
3.	Illustrate on different types of Biosafety Cabinets, with the help of a neat diagram explain features and advantages of BSC-3.	10 10	3	1
4.	What are GMO? Explain importance and applications of GMO's in various fields	10 10	2	
5.	Write explanatory notes on: 1. Roles of Institutional Biosafety Committee 2. Cartagena protocol	5 5 5	1	

BT-L-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5
	Test	Max Marks	30	20			10	20	20		

Academic year 2024-2025 (Even Sem)

Date	July 23, 2024	Maximum Marks	10 + 50
Course Code	BT242AT	Duration	120 min
Sem	IV Semester	Closed Book Offline Quiz and Test – 2	

Bio Safety Standards and Ethics (Basket course)

Answer all questions in Part A & Part B, Answer Part A in first two pages in sequence only

Part A

	Questions	M	BT-L	CO
1	In food, the term used for disease causing microorganism is referred as	1	2	3
2	Mention the temperature range which is optimum for bacterial growth in food	1	1	4
3	What is the 6 th principle of HACCP ?	1	2	3
4	Mention the instrument used to multiply the DNA	1	1	3
5	Mention the concentration of the lead in food as per the What is the limit for lead in food as per FSSAI	1	2	3
6	Mention any two food certification followed in the world	1	2	3
7	Expand the term GAP	1	2	4
8	People, premises, processes, products and procedures is related to _____	1	3	4
9	Mention any two examples for microbiological contamination	1	2	
10	Mention the number of Licenses issued by FSSAI	1	2	

Part B

Sl. No	Questions (Test)	M	BT-L
1.	Mention the physical, chemical, and biological hazardous material which contaminate the food.	10	2
2	Expand the term FSSAI, illustrate its functions, importance & type of license issued by them.	10	3
3	Discuss various methods to eliminate the chemical, Biological and physical hazardous materials from food.	10	3
4	Expand the term HACCP and explain in detail the principles of HACCP.	10	3
5a	List out the food spoilage microorganisms and explain the diseases caused by them.	5	3
5b	Mention the GMP and GLP in maintaining the food hygiene	5	

BT-L-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5
	Test	Max Marks	---	--	37	24	2	17	41	---	

Date	27 th August 2024	Maximum Marks	50+1
Course Code	BT242AT	Duration	110 m
Sem	IV Semester	Improvement Test	

Bio Safety Standards and Ethics (Basket course)

Answer QUIZ in sequence only in first two pages of answer booklets

Sl. o	Questions(quiz)	M	BT-L
1.	Explain with two examples about food allergens	1	1
2	What is Research ethics?	1	1
3	What are the advantages of preservation of food?	1	1
4	What are flavouring agents used in food? Give examples	1	1
5	List out the health policies in India	2	1
6	What is ethics in food industry?	2	1
7	List out 4 methods used for food analysis	2	1

Sl. o	Questions (Test)	M	BT-L
1.	Suggest and explain on various strategies involved in food preservation.	10	2
2	Illustrate and classify on various food packaging methods used in food industry.	10	3
3	<i>"Meat and meat products derived from livestock treated with antibiotics and hormones can cause adverse effects on consumer's health"</i> justify the statement	10	3
4	Elaborate on smart packaging methods with suitable examples. Add a note on packaging materials	10	4
5	Classify and explain the importance of food additives, Also add the permissible limits of few food additives	10	2

BT-L-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars	CO1	CO2	CO3	CO4	L1	L2	L3	L4
	Test								
	Max Marks	--	--	33	27	10	20	20	10

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RV COLLEGE OF ENGINEERING®
(An Autonomous Institution Affiliated to VTU)
IV Semester B. E. Examinations Sept./Oct. – 2024
Biotechnology

BIO SAFETY STANDARDS AND ETHICS

Time: 03 Hours

Instructions to candidates:

Maximum Marks: 100

- Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
- Answer FIVE full questions from Part B. In Part B question number 2 is compulsory. Answer any one full question from 3 and 4, 5 and 6, 7 and 8, 9 and 10.

PART-A

M BT CO

1	1.1	Differentiate between Biosafety cabinets and Laminar air flow.	02	3	1
	1.2	What is biohazard? List out any two examples of bio hazards.	02	2	1
	1.3	What are food allergens? Give two examples.	02	1	3
	1.4	What is the maximum concentration of lead permitted in food as per FSSAI?	01	1	3
	1.5	What is level 3 biosafety cabinet?	01	1	1
	1.6	Expand the term "GAP".	01	1	4
	1.7	Explain the "LMO", give example.	01	1	2
	1.8	Discuss the advantages of preservation of food.	01	1	3
	1.9	Cholera is caused by microorganism.	01	1	2
	1.10	What is the most dangerous temperature to preserve food?	01	1	3
	1.11	What are food- borne diseases? Give two examples	01	2	3
	1.12	Give the importance of HEPA filters, why are they used?	01	2	2
	1.13	Mention the role of antibiotics in Poultry	01	2	4
	1.14	What are the factors which contribute for food spoilage?	01	2	3
	1.15	How many types of FSSAI licenses are available? What are they?	01	2	3
	1.16	Which are the unit operations applicable in food processing?	01	2	3
	1.17	What is blanching? Give example.	01	1	3

PART-B

2	a	Illustrate and elucidate various Biosafety levels.	08	3	1
	b	What are the consequences of Biohazards? Explain any four.	08	2	1
3	a	Elaborate on GEAC, its compositions, duties, functions of biosafety.	08	3	2
	b	Classify GMOs and its applications in food, agriculture and pharmaceutical fields.	08	2	2
OR					
4	a	Illustrate and give its functions of following committee (i) RCGM (ii) IBSC	08	4	2
	b	Explain and discuss the features of Cartagena Protocol and its importance of Biosafety	08	3	2
5	a	What is Food Hygiene? What are the possible pathogens that can contaminate food and how do you prevent food contamination?	08	2	3
	b	Explicate the features of FSSAI and its role in FBO	08	3	3

6	a	Elaborate on the various instruments required for Food Analysis and Testing in laboratories for maintaining the food quality	08	2	3
	b				
		Illustrate the principles of Hazard Analysis Critical Control Point (HACCP), elaborate each principle with an example	08	3	3
7	a	Mention the needs and importance of food, processing operations. Give advantages of food processing.	08	3	3
	b				
		Classify various food packaging methods, and add an explanatory note on the smart food packaging methods.	08	3	3
		OR			
8	a	Discuss on Good Manufacturing Practices applicable to food and advantages of GLP	08	3	4
	b				
		Classify and Illustrate with suitable examples the various methods for food preservations and limits of preservatives with examples	08	3	4
9	a	"In Human society, Food safety, ethics are most important". Justify the statement	08	2	5
	b				
		Write explanatory notes on Bioethics and Clinical Ethics	08	3	4
		OR			
10	a	"The use of antibiotics and hormones in poultry and its impact on Food Safety". Explain the statement	08	4	5
	b				
		Classify and explain about the food additives and mention the limits of food additives as per the food standards	08	4	4