



RV College of
Engineering®

Mysore Road, RV Vidyaniketan Post,
Bengaluru - 560059, Karnataka, India
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DEPARTMENT OF
BIOTECHNOLOGY
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	3	1
2.	List out and discuss about different biosafety levels with a neat triangular diagram.	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	3	1
4.	What are GMO? Explain importance and applications of GMO's in various fields	10	2	2
5.	Write explanatory notes on: 1. Roles of Institutional Biosafety Committee 2. Cartagena protocol	5 5	1	2

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

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	30	20			10	20	20			



DEPARTMENT OF
BIOTECHNOLOGY
Academic year 2024-2025 (Even Sem)

Date	27 th August 2024	Maximum Marks	50+10
Course Code	BT242AT	Duration	110 min
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	CO
1.	Explain with two examples about food allergens	1	1	3
2	What is Research ethics?	1	1	3
3	What are the advantages of preservation of food?	1	1	3
4	What are flavouring agents used in food? Give examples	1	1	4
5	List out the health policies in India	2	1	4
6	What is ethics in food industry?	2	1	4
7	List out 4 methods used for food analysis	2	1	4

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

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

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	--	--	33	27	10	20	20	10	---	--



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DEPARTMENT OF
BIOTECHNOLOGY
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	3
10	Mention the number of Licenses issued by FSSAI	1	2	3

Part B

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

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

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	---	--	37	24	2	17	41	---	---	--

BT242TC

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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

Maximum Marks: 100

Instructions to candidates:

1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. 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					
		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

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