

DESIGN OF QUESTION PAPER

Subject : **BIOTECHNOLOGY**
 Paper : Theory
 Class : XI
 Full Mark : 70
 Time : 3 Hours

I	WEIGHTAGE TO OBJECTIVES:					
	Objectives			Marks	Percentage	
	Knowledge (K)			14	20	
	Understanding (U)			32	46	
	Application (A)			21	30	
	Skill (S)			3	4	
Total :			70	100		
II	WEIGHTAGE TO FORM OF QUESTIONS:					
	Form of Questions		No. of Question	Time (in minute)	Marks	Percentage
	Essay/Long Answer(E/LA)		3	60	15	21
	Short Answer(SA-I)		7	56	21	30
	Short Answer(SA-II)		10	40	20	29
	Very Short Answer(VSA)		10	20	10	14
	MCQ		4	4	4	6
	Total:		34	180	70	100
III	WEIGHTAGE TO CONTENT:					
	UNIT/CONTENTS:			Marks	Percentage	
	I.	Introduction to Biotechnology		16	16	
	II.	Bio molecules		20	28	
	III.	Cell and Development		20	28	
	IV.	Genetics & Molecular Biology		20	28	
Total :			70	100		
IV	SCHEME OF SECTIONS : Nil					
V	SCHEME OF OPTIONS : Nil					
VI	DIFFICULTY LEVEL :					
	Difficulty	:		30%		
	Average	:		50%		
	Easy	:		20%		

Abbreviation : K(Knowledge), U(Understanding), C(Comprehension), Exp.(Expression), Skill(S), E(Essay Type), SA (Short Answer Type), VSA (Very Short Answer Type), MCQ(Multiple Choice Question)

DESIGN OF QUESTION PAPER

Subject : **BIOTECHNOLOGY**
 Paper : Theory
 Class : XII
 Full Mark : 70
 Time : 3 Hours

WEIGHTAGE TO OBJECTIVES:						
I	Objectives			Marks	Percentage	
	Knowledge (K)			14	20	
	Understanding (U)			32	46	
	Application (A)			21	30	
	Skill (S)			3	4	
	Total :			70	100	
WEIGHTAGE TO FORM OF QUESTIONS:						
II	Form of Questions	No. of Question	Time (in minute)	Marks	Percentage	
	Essay/Long Answer (E/LA)	3	60	15	21	
	Short Answer (SA-I)	7	56	21	30	
	Short Answer (SA-II)	10	40	20	29	
	Very Short Answer (VSA)	10	20	10	14	
	MCQ	4	4	4	6	
	Total:		34	180	70	100
	WEIGHTAGE TO CONTENT:					
UNIT/CONTENTS:				Marks	Percentage	
III	1 Protein & Gene Manipulation					
	I	Protein Structure & Engineering		15	22	
	II	Recombinant DNA Technology		15	22	
	III	Genomics & Bioinformatics		10	14	
	2 Cell Culture Technology					
	I	Microbial Culture & Application		10	14	
	II	Plant Cell Culture & Application		10	14	
	III	Animal Cell Culture & Application		10	14	
	Total :			70	100	
	IV	SCHEME OF SECTIONS : Nil				
V	SCHEME OF OPTIONS : Nil					
VI	DIFFICULTY LEVEL :					
	Difficulty	:	30%			
	Average	:	50%			
	Easy	:	20%			

Abbreviation : K(Knowledge), U(Understanding), C(Comprehension), Exp.(Expression), Skill(S), E(Essay Type), SA (Short Answer Type), VSA (Very Short Answer Type), MCQ(Multiple Choice Question)