PARUL UNIVERSITY

PARUL INSTITUTE OF APPLIED SCIENCES

MID SEMESTER INTERNAL EXAMINATION, March 2020

M. Sc. Semester 4
Subject: Microbiology

Paper Code: 11201252 Industrial Microbiology and fermentation technology

Maximum Marks: 40

MCQ 4

Main aim of inoculums preparation is

Date: 3/3/2020 Time: 12:00

Instru	ctions:							
1.	All ques	tions are compulsory and opt	ions are	given in first and second	d question			
	only.	only.						
2.	Number	rs to the right of question indi	cate the	marks of respective que	stion.			
Q. 1	Atten	npt any one question of the follo	wing.		(08)			
	(i) Explain production of enzymes in detail							
	(ii) D	a fermentor.						
Q. 2	Atten		(12)					
	(i) Ex							
	(ii) Describe selection and screening of micro-organisms through							
	primary screening							
	(iii) Describe Vitamin B12 production alongwith the structure of							
	Vitamin B12							
	(iv) Describe scale up of fermentation process.							
	(v) S	esses.						
Q. 3	Do as directed. Attempt all five questions.							
	(i) Explain air lift fermentor.							
	(ii) What is Idiophase.							
	(iii) List different types of protease.							
	(iv) D	(iv) Diagram of air lift fermenter						
	(v) Short note on bubble fermentor							
Q. 4	Write correct option in your answer sheet for following 15 multiple							
	choice	e questions.						
	_							
MCQ 1	e e e e e e e e e e e e e e e e e e e							
	(A)	one or few steps	(B)	Allow discarding of m	any			
				valueless microbes				
	(C)	Easy detection of the small	(D)	All of the above				
	(-)	percentage of useful	(-)					
		microorganism						
MCQ 2	2 Lyop							
1,1002	(A)	cryopreservation						
	(C)	freeze drying primary screening	(B) (D)	All the above				
MCQ 3								
	direction is called the							
	(A)	Downcomer	(B)	disengagement zone				
	(C)	air riser	(D)	Flotsam				
	(~)	=====	\ - /	=				

	(A)	To minimize contamination	(B)	To increase production				
	(C)	To decrease lag phase of desired organisms	(D)	All of the above				
MCQ 5	Microbes are improved in industry for							
	(A)	Better product	(B)	High yield				
	(C)	Stability of organism	(D)	All of the above				
MCQ 6	Which of the following methods used for the improvement of microbes in							
	industry?							
	(A)	protoplast fusion	(B)	Recombinant DNA technique				
	(C)	mutation	(D)	All of the above				
MCQ 7	Which of the following methods used only for the improvement of fungal strain?							
	(A)	Protoplast fusion	(B)	Mutation				
	(C)	Conjugation	(D)	Parasexual cycle				
MCQ 8	The number of baffles in a standard stirred tank bioreactor is							
	(A)	1	(B)	2				
	(C)	3	(D)	4				
MCQ 9	Increase in desired product by particular organism can be achieved by							
	(A)	Genetic modification	(B)	Selecting proper medium				
	(0)	C-1	(D)	components				
	(C)	Selecting stable organisms	(D)	All of the above				
MCQ 10	Whic	Which of the following device is use to supply sterile air in the fermentation vessel						
	during aerobic fermentation process?							
	(A)	Baffles	(B)	Sparger				
	(C)	Impeller	(D)	Oxygen probe				
MCQ 11	Which of the following disrupt vortex and provide better mixing?							
	(A)	Sparger	(B)	Baffle				
	(C)	Impeller	(D)	Foam breaker				
MCQ 12	Which of the following serve dual purpose of aeration and agitation?							
	(A)	Cooling water tubing	(B)	Impeller				
	(C)	Sparger	(D)	Baffle				
MCQ 13	Air can be continuously sterilized by							
	(A)	Filtration	(B)	Steam				
	(C)	Chemicals	(D)	All the above				
MCQ 14	Fermentor for fermentation process should be							
	(A)	Able to withstand high	(B)	Able to withstand high pressure				
		temperature						
	(C)	Able to resist corrosion	(D)	All the above				
MCQ 15	is used for cultivation of algae							
	(A)	photobioreactor	(B)	fermentor				
	(C)	bioreactor	(D)	None of the above				