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## SARDAR PATEL UNIVERSITY

Course: B. Sc. Biotechnology, Third – Semester Examination Code No.: US03CBIT22, Paper Title: Microbial Biotechnology Date: 16-06-2022, Day: Thursday, Time: 12:00 pm to 2:00 pm

Note:	Figures	to the right indicate mark	S.			
	8	<i>.</i>		T	otal Marks: 70	
Q.I	Multipl	le Choice Questions			[10]	
1)	are the smallest of all the microbes.					
,	a)	 Viruses	b)	Bacteria		
	c)	Fungi	d)	Protists		
2)	Which microorganism(s) among the following perform photosynthesis by utiliz					
	light?					
•	a)	Cyanobacteria	b)	Viruses		
	c)	Fungi	d)	Cyanobacteria, fungi and v	iruses.	
3)	Which of the following action are not affected by antimicrobial agents?					
,	a)	Capsule formation	b)	· · · · · · · · · · · · · · · · · · ·		
	c)	Cell wall synthesis	d)	Replication		
4)	Both detection & isolation of high yielding species from the natural source materia					
	containing a heterogeneous microbial population is called .					
	a)	Screening	b)	Selection		
	c)	Analysis	d)	Sorting		
5)	Inoculum media usually differ in composition from					
	a)	Synthetic media	b)			
	c)	Production media	d)	Selective media		
6)	Batch culture is a/an culture system.					
	a)	Open	b)	Isolated		
	c)	Closed	d)	Semi-closed.		
7)	Which enzyme hydrolyses Starch to Maltose?					
٠,	a)	Amylase	b)	Protease		
	c)	Gelatinase	d)	Lipase		
8)	·	is an edible fung	gus.	•		
•	a)	Mucor	b)	Agaricus		
	c)	Penicillium	d)	Rhizopus		
9)	Mushro	om is		•		
,	a)	Saprophytic fungus	b)	Heterotrophic fungus		
	c)	Autotrophic algae	d)	Parasitic plant		
10)	The substrate used by microorganisms to produce single cell proteins includes					
	a)	Agricultural wastes	b)	Methane gas		
	c)	Industrial wastes	→ d)	All of these	0	
			$(\hat{\Lambda})$		(PTO)	
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Q.II	Do as directed	[80]
a)	The major component of bacterial cell wall is	
b)	Corn steep liquor in media is source of	
c)	is the by-product of cheese.	
d)	mushroom is the common name of Volvariena Volvacea species	
e)	Bleach is an example of halogen group of chemicals used for disinfection.	
• ,	(True/False)	
f)	The prototrophs are the organisms which are not capable of synthesizing all growth	
-,	requirements for themselves. (True/False)	
g)	During batch culture/fermentation, nutrients in the fermenter are utilized at a fast	
<i>5)</i>	rate. (True/False)	
h)	Cyanobacteria are photosynthetic. (True/False)	
11)	•	
Q.III.	Answer the following questions in short. (Attempt any 10)	[20]
a)	Write the different characteristics of viruses.	
b)	Differentiate between viruses and bacteria.	
c)	How osmotic pressure is used for microbial control?	
ď)	Define synthetic media.	
e)	What is auxotrophic mutant?	
f)	Define - Enrichment culture technique.	
g)	What is idiophase?	
h)	Give the applications of protease.	
i)	Write a brief note on yogurt as fermented food.	
j)	What is SCP?	
k)	Define Bioinsecticide.	
l)	List out different types of bioplastics.	
,		1221
Q.IV	Answer the following question in detail. (Attempt any four)	[32]
a)	Discuss the various types of bacteria on the basis of their shape and flagella.	
b)	Explain in detail microbial physical control agents.	
c)	Give an account on crowded plate technique for microbial isolation.	
d)	Explain in detail Strain improvement.	
e)	Give a detailed note on cheese production.	
f)	Discuss in detail production of amylase from microorganisms with its applications.	
g)	Give an account on mushroom cultivation.	
h)	Write a short note on fungi as biofertilizers.	
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