[45/A-10]

## SARDAR PATEL UNIVERSITY B.Sc. SEMESTER-VI EXAMINATION, JULY, 2021

Saturday, 17-07- 2021 10:00 A.M. to 12.00 P.M.

## SUBJECT: MICROBIOLOGY US06CMIC23

AGRICULTURE & ENVIRONMENTAL MICROBIOLOGY

Total Marks: 70

Q-1 <b>Answer all</b> multip	ole choice questi	ons by choosin	g the most appropriate one (10	
Azolla provides _	in soil as	a biofertilizer.		
a) Nitrogen			b) Phosphorus	
c) Sulphur		d) All of these		
2. bi	ofertilizers make	e plant growth a	and resistance factors	
			yield of the plants.	
a) Nitrogen fixin			b) Mycorhhizal	
c) Phosphate solu	ubilizing		d) All of these	
of Rhizobia?  a) peat soil	b) lignite		e preparation of inoculants d) all of these	
<ul><li>4. Separation of cel</li><li>a) maceration</li></ul>	ls along the line b)necrosis			
5. Red scale of onic	on imparts	towar	ds some plant pathogens.	
<ul><li>a) susceptibility</li><li>c) symbiosis</li></ul>	b) resistar	nce	Q. P. Science	
6. Vivotoxins are p	roduced by		LIBRARY	
a) plant pathoger	n b) host	plant	I V Nagat	
c) none of these	d) both	n, a) and b)	*. Isas	

7.	Xenobiotics are	chemicals.		
	a) Man-made	b) organic		
		d) none of these		
	1000			
8.	is in the second of the second	s the process of using microl	bes to remove pollutar	its.
	a) Bio-magnification	b) Biorem	nediation	
	c) Bioleaching	d) all of t	these	
9.	. Recalcitrant compound in the	ds do not easily undergo biode environment.	degradation and they a	re
	a) persistent compo		b) pollutants	
	c) non-biodegrada		d) all of these	
10	is one o	f the most dangerous green	house gases.	
	a) Nitrogen b) Ox	xygen c) Chlorofluorocarl	oons d) All of thes	se
	wherealthe Main has built			
Q-2	(a) Fill in <b>all</b> the blanks	:( one mark each)		
		_ insecticide product.( funga	1/bacterial/viral)	
	1. Doom is a	_ msecueide product.( rungu	iii odotoliali + iiai)	
,	is an enzym	e which is a toxin because o	f its disruption of cell	
	membranes.(Lecithin		locida h	
	memoranes. Decimin			
	3 DDT is recalcitrant b	utis biodegradable	.(methoxychlor/branch	nec
	ABS)	of calls along the time of mid	. 4 Separation	
	4. Biogas is a mixture of	of gases with about 60%		
		ne/hydrogen)		
	aq tosiq singe ebewot .			
	(b) Write T for the true	statement and F for the false	e. Mention the questio	n
	number carefully as give	en below: (one mark each)	c) symbios	
			R.T. P. Science	
	1. Dinitrogenase is also	called Fe-protein.	(a)	\
	2. Wilt is sudden death	of leaves, blossoms or twigs	LIBRARY LIBRARY	
	3. All xenobiotic compo	ounds are recalcitrant.	*	,
	4. Hydropower is a non	renewable energy source.	Nagar	







- 1. Name types of viral insecticides.
- 2. Write any two advantages of viral insecticides.
- 3. Name one fungal biofertilizer and one fungal insecticide.
- 4. What are phytoalexins?
- 5. What is necrosis? Enlist its symptoms.
- 6. What is hemicellulose made up of?
- 7. Name any two non renewable energy sources.
- 8. What are bioplastics? Give example.
- 9. Name techniques of soil bioremediation.
- 10. What is MEOR? Name the microbe useful for that.
- 11. Name the microbes involved in biogas production.
- 12. Name the raw material used for economic production of biogas.

## Q-4 Describe any 4 in detail (8 marks each):

- 1. Any one bacterial insecticide.
- 2. Advantages and limitations of biofertilizers.
- 3. Enlist the important chemical weapons of plant pathogens. Describe any one of them.
- 4. Role of phenolic compounds in plant defense from pathogens.
- 5. Creation of superbug by transfer of plasmids for the biodegradation of oil spills.
- 6. Explain phenomenon of biomagnification by providing suitable example.
- 7. Commercial processes of bioleaching.
- 8. Greenhouse gases, global warming and measures of their control.

