REV-01 MMB/27/32

M.Sc. MICROBIOLOGY SECOND SEMESTER SOIL & ENVIRONMENTAL MICROBIOLOGY MMB – 204

(Use Separate Answer Scripts for Objective & Descriptive)

Duration: 3 hrs. Full Marks: 70

(PART-A: Objective)

Time: 20 min. Marks: 20

Choose the correct answer from the following:

1X20 = 20

1.is the zone which extends from 200 m to 1000m in the aquatic ecosystem.

a. Mesopelagic

b. Abyssopelagic

c. Bathypelagic

- d. Benthopelagic
- 2. Mantoux test is associated with
 - a. Japanese encephalitis
 - c. Chickenpox

- b. Coronavirus
- d. Tuberculosis

- 3. 'MRSA' stands for
 - a. Minocycline-resistant Staphyllococcus aureus
 - b. Macrolides-resistant Staphyllococcus aureus
 - c. Metronidazole-resistant Staphyllococcus aureus
 - d. Methicillin-resistant Staphyllococcus aureus
- 4. Which of the following bacterium is called as the superbug that could clean up the oil spills?
 - a. Bacillus subtilis

b. Pseudomonas putida

- c. Pseudomonas denitrificans
- d. Bacillus denitrificans

- 5. 'DOTS' stand for
 - a. Directly obliged treatment short-course
 - b. Distantly obliged treatment short-course
 - c. Directly observed treatment short-course
 - d. Distantly observed treatment short-course
- 6. Which among the following is not classified under benevolent interactions?
 - a. Commensalism

b. Mutualism

c. Ammensalism

d. Neutralism

- 7. Rhizophere refers to the small area
 - a. Around the root

b. On the root

c. On the primary root

- d. All of the above
- 8. The association which involves the exchange of nutrients between two species is referred to as
 - a. Mutualism

b. Parasitism

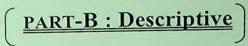
c. Commensalism

d. Antagonism

9.	Decarboxylation is	L-	Day and of carbonal array	
	a. Removal of aminec. Removal of hydroxyl group	b. d.	Removal of carboxyl group Removal of halogen group	
10.	The fungicide, Thirum is degraded by			
	a. Bacillus subtilis	b.	Pseudomonas sp.	
	c. Clostridium sporogenesis	d.	None of the above	
11.	The permissible limit of turbidity in water is		ppm 10-15	
	a. 2-5 c. 5-10	d.		
12.	turbidity meter can measure	the t	turbidity of the order of 0-1 ppm	
	a. Nephelometer	b.	Turbidity rod	
	c. Baylis	d.	Jackson's	
13.	Skimming tanks are used in waste water trea			
	a. Oil and grease c. Minerals	b. d.	Salts Dirts	
			Ditts	
14.	Permissible limit of pH in water is	ъ.	6-8.5	
	c. 6.6-8.5	d.	7	
15.	is the coagulants used in	the se	edimentation of waste water	
	treatment.			
	a. Lime c. Soda Ash	b. d.	All of the above	
16			This is the above	
16.	Nitrite is converted into nitrate by	· Ъ.	Nitrosomonas	
	c. Both A and B	d.	None of the above	
17.	Phosphorus in the sewage is mostly present	in th	e form of	
	a. Orthophosphate	b.	Polyphosphate	
	c. Organic bound phosphorus	d.		
18.		asin	or floor of the ocean, regardless of	
	depth a. Littoral	b.	Sub littoral	
	c. Benthic	d.	Continental slope	
19	is a transitional zone between rivers and sea representing an ecotone			
	possessing unique ecological features and b			
	a. Estuary c. Benthic zone	b. d.		
20	. VAM is a Biofertilizer.	***		
20	· VAIVI IS a Diolerunzer.			

a. Bacterialc. Algal

b. Fungald. All of the above



Time: 2 hrs. 40 min. Marks: 50

[Answer question no.1 & any four (4) from the rest]

1.	Discuss any two airborne diseases along with it preventive measures and treatments.	10
2.	What do you mean by lentic and lotic ecosystem. Explain in brief each with examples. Describe the phenomenon of thermal stratification occur in lakes.	4+6=10
3.	Explain the physical and chemical properties of potable water.	10
4.	Write a note on waste water treatment.	10
5.	a. Discuss about the root nodulation system.	4+6=10
	b. Classify soil types based on its physical and microbial habitation.	
6.	What are biofertilizers? Explain the classification of biofertilizers.	2+8=10
7.	a. What do you mean by biogeochemical cycle? Explain briefly its types.	3+7=10
	b. Critically elaborate the degradation of pesticides by microbes	
8.	Explain the mechanism of root nodulation by bacteria and its interaction with soil.	10

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