

PARUL UNIVERSITY
PARUL INSTITUTE OF APPLIED SCIENCES
MID SEMESTER INTERNAL EXAMINATION, MARCH 2018
B. Sc. Semester VI
Subject: Microbiology

Paper Code:11101351

Title of the paper: Agricultural Microbiology

Date: 26/02 /2019

Time: 11:30-1:00

Maximum Marks: 40

Instructions:

- 1. All questions are compulsory and options are given in first and second question only.**
- 2. Numbers to the right of question indicate the marks of respective question.**

Q. 1	Attempt any one question of the following. (i) Discuss the degradation of Lignin and cellulose. (ii) Discuss Carbon cycle.	(08)
Q. 2	Attempt any three questions of the following. (i) Discuss the methods of application of Biofertilizer. (ii) Write down important characteristics of Bioinoculant. (iii) Discuss the mechanism of phosphate solubilization along with causal organism. (iv) What is rhizosphere and what type of micro-flora is present in the rhizosphere? (v) Discuss sulfur cycle.	(12)
Q. 3	Do as directed. Attempt all five questions. (i) Write down the full form of PGPR. (ii) Name any 2 factors effect Microbial growth in rhizosphere. (iii) Name any compound which are released from plant root into the rhizosphere. (iv) Define Biogeochemical cycle. (v) Name any 2 free living Nitrogen fixer.	(05)
Q. 4	Write correct option in your answer sheet for following 15 multiple choice questions.	(15)

MCQ 1	R:S value of bacteria in rhizosphere			
	(A)	10-20 or more	(B)	1-10
	(C)	10-30	(D)	Less than 10
MCQ 2	Most common cellulose fermenter in nature are the member of			
	(A)	Clostridium	(B)	Azotobacter
	(C)	Frankia	(D)	Fusarium
MCQ 3 are most abundant in rhizosphere.			
	(A)	Short gram negative rods	(B)	Gram positive rods
	(C)	Spore forming bacteria	(D)	Arthobacter group
MCQ 4	The order of soil population is			
	(A)	Bacteria >Actinomycetes >Fungi >Algae> Protozoa	(B)	Actinomycetes> Bacteria >Fungi>Protozoa> Algae
	(C)	Bacteria> Protozoa> Fungi >Actinomycetes> Algae	(D)	Bacteria >Fungi >Actinomycetes> Algae >Protozoa
MCQ 5	They cover about _____ of the total root area occurring profusely on the root hair region and rarely in the root tips.			
	(A)	4-10%	(B)	10-20%

	(C)	50-60%	(D)	1-10%
MCQ 6	rhizosphere organisms are more when the soil moisture is _____			
	(A)	Low	(B)	Moderate
	(C)	High	(D)	50%
MCQ 7	Anaerobic Non symbiotic nitrogen fixing organism is/are			
	(A)	Clostridium pasteurianum	(B)	Azotobacter
	(C)	Both	(D)	None
MCQ 8	Bacteria responsible for denitrification are			
	(A)	Pseudomonas	(B)	Thiobacillus
	(C)	Bacillus	(D)	All
MCQ 9	Loam is a soil composed of			
	(A)	Sand, Silt and Clay in equal proportion	(B)	Sand predominates
	(C)	Clay predominates	(D)	The amount of sand and silt is equals to that of clay
MCQ 10	which of the following organism is cellulytic actinomycetes			
	(A)	Micromonas	(B)	Nocardia
	(C)	Streptomyces	(D)	all of the above
MCQ 11	Nitrogen Fixing stage of rhizobium is called			
	(A)	Rhizoid	(B)	Bacteroid
	(C)	Viroid	(D)	Bacteria
MCQ 12	Formation of “infection thread” in certain root hairs is due to			
	(A)	Rhizobium bacteria	(B)	Pathogenic bacteria
	(C)	All of the above	(D)	None of the above
MCQ 13	Vermicomposting, which			
	(A)	Uses bacteria to help break down the organic waste.	(B)	Uses worms to help break down the organic waste.
	(C)	Uses microorganisms to help break down the organic waste.	(D)	None of the above.
MCQ 14	EM is.....			
	(A)	Complex microorganism solution.	(B)	Complex fungal solution.
	(C)	Complex bacterial solution	(D)	None of the above
MCQ 15	Desulfuromonas is			
	(A)	Obligate anaerobes	(B)	Sulfate reducing bacteria
	(C)	Both of above	(D)	Facultative aerobe

-- All The Best--