



বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

M.Sc. Examinations 2020

Semester IV

Subject: MICROBIOLOGY

**Paper: MCB 493
(Practical)**

Full Marks: 50

Time: 3Hrs.

Candidates are required to give their answers in their own words as far as practicable.

MCB 493.1 (Environmental Microbiology)

Answer any one of the following:

1. Write down the principle of MPN test
2. Write down the procedure of presumptive and confirmatory test of MPN
3. What is BOD? How can you determine the BOD of a water sample?
4. How does the presence of alkaline phosphatase activity in milk serves as an indicator of product safety?
5. Write the principle and interpretation of citrate utilization test
6. Write the working protocol of performing Voges Proskauer test in flow chart

MCB 493.2 (Bioprocess Technology)

Answer any one of the following:

1. How do you isolate the predominant microbes associated with curd?
2. Write the biochemical principle of production of ethanol from molasses
3. What do you mean by volumetric productivity of ethanol generated by fermenting molasses by baker's yeast
4. Write the working principle for production of amylase by an bacterial isolate
5. Write the name of one low-cost substrate for production of amylase and how the enzyme can be harvested after solid state fermentation in conical flask?
6. Write the working protocol for estimation of amylase produced through microbial fermentation in submerged and solid state condition