

2021

MICROBIOLOGY — HONOURS — PRACTICAL

Paper : CC-9P

(Environmental Microbiology)

Full Marks : 30

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. (a) Write down the basic principle of determination of BOD.
 (b) Two polluted river water samples (S1 and S2) are given to you for determination of their BOD. Consider that 5ml of sample has been added to the 300ml standard BOD bottle in each case.
 DO₀ and DO₅ (in mg/L) of the samples at 20°C are as follows :

Sample	DO ₀	DO ₅
S1	8.2	4.9
S2	7.5	2.5

Calculate BOD₅ of the given water samples.

- (c) Comment on the quality of water samples. 2+5+1
2. The photographs (will be provided by the centre) are showing the results of Voges-Proskauer (VP) test and Indole test for a particular organism.
- (a) Explain the results representing the chemical reaction if occurred.
 (b) Comment on the nature of organism. (2+1/2)×2
3. (a) Briefly describe the principle of the experiment on '*Isolation of amylase synthesizing organisms from soil*'.
 (b) Write a flow chart of procedure for the above mentioned experiment stating the complete medium details.
 (c) Give an account on probable observation on your plate(s). 2+3+2
4. viva voce. 5
5. Laboratory notebook. 5
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