

THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. DEGREE PROGRAMME – LEVEL 5 -2012/2013

BOU 3100/BOE5100- ENVIRONMENTAL AND APPLIED MICROBIOLOGY

ASSESSMENT TEST 1 (OPEN BOOK TEST)



Duration – One (01) hour

Reg. No. -

Date – 27th July 2013

Time – 3.00 p.m. – 4.00 p.m.

Answer all questions on this paper itself. This paper consists of four (05) questions and five (05) pages.

01. Fill in the blanks with suitable word/words.

1.1 The process by which a water body acquires high concentrations of nutrients is called

1.2 technique can be used to identify aerial microorganisms present in a known volume of air.

1.3 Among fungi present in the atmosphere, genuspredominate.

1.4 The main treatment processes involved in purification of drinking water for individual home supplies are, and

1.5 Two major sources of air borne microorganisms are and

1.6 Fossilised microbial mats known as were among the first indications of life on earth.

1.7 Microorganisms found at the water-air interface are called

1.8 is the first step in municipal water treatment process.

1.9 Some iron bacteria such as and are capable of transforming soluble iron compounds in water into insoluble forms.

1.10 Two commonly used methods of secondary treatment of waste water are and

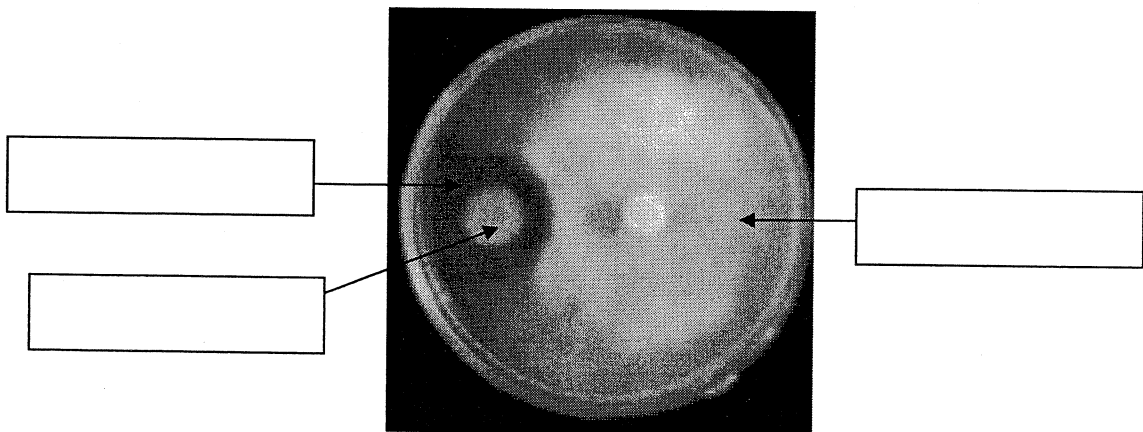
02. (a) Lichen is a classical example of beneficial association between two partners. Who are they?

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(b) What is the main function of each partner of this association?

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(c) Given below is an agar plate obtained after inoculating two soil microorganisms and incubating in a laboratory to study the effect of antibiosis. Label the areas A, B and C in the diagram.



(d). Explain briefly the effect of this biological association of these two microorganisms in the above agar plate.

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03. (a). What do you mean by food infection?

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b) A patient having symptoms of diarrhea and abdominal cramps was rushed to the hospital and the doctor diagnosed that he is suffering from a food infection due to a meat curry he had for dinner on the previous day.

i. What can be the food infection that the patient is suffering from?

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ii. Give a brief account on the nature of the causative organism.

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iii. What are the measures can be taken to prevent such an infection?

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04. (a). Indicate one (01) organism (generic name) responsible for the deterioration of the following material.

Material	Organism
i. Metal pipes buried in soil
ii. Optical lenses
iii. Rubber pipe
iv. Painted wall
v. Slats of water cooling towers

(b). List five (03) resulting effects of decaying wood mainly by fungi.

i.
ii.
iii.

05. (a). What are the three (03) types of waste water of a community?

i.

ii.

iii.

(b). What is the significance of Biological Oxygen Demand (BOD) in water pollution?

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