

2022

B.F.Sc. 1st Semester Examination

Soil and Water Chemistry

PAPER — BFSC-103

Full Marks : 50

Time : 2 hours



The figures in the right-hand margin indicate marks.

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

Illustrate the answers wherever necessary.

1. Answer any **ten** from the following questions :
2×10=20

- (a) Write down the composition of sea water.
- (b) Classify water on the basis of salinity.
- (c) Write the names of different physical properties of water.

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(Turn Over)



(2)

- (d) What is TAN?
- (e) Classify soil on the basis of texture.
- (f) What is C : N ration in aquaculture? Mention its proper value for the same.
- (g) Which soil is suitable for aquaculture and why?
- (h) What do you mean by organic carbon?
- (i) Name two toxic gases found in aquaculture pond.
- (j) What do you mean by saline soil? Cite an example.
- (k) What is pH? Write its empirical formula.
- (l) What is soil fertility?
- (m) Write the chemical formula of dolomites.
- (n) What do you mean by micronutrients? Give the example of four micronutrients essential in aquaculture.
- (o) Write down the names of four bacteria found in sediment of shrimp culture ponds.

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(Continued)

2. Answer any six from the following questions :

5×6=30

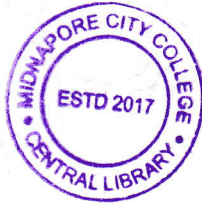
(3)

- (a) What is DO? Write the relationship of DO with temperature and salinity.
- (b) What is buffer? Write its significance in aquaculture.
- (c) Write down the importance of different physico-chemical parameters in aquaculture.
- (d) Classify lime and its applications in aquaculture.
- (e) Explain in detail why chlorination is important in shrimp farming.
- (f) Mention the criteria for site selection in aquafarming.
- (g) Write a brief note on soil management in aquaculture.
- (h) What do you mean by alkalinity and hardness? Write down the importance of these two parameters in shrimp farming.

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(Turn Over)





(4)

- (i) Write in brief the functional significance of microbes in aquafarming.
- (ii) Briefly discuss the effect of lime on correction of acidic soil.

Enrichment media are typically liquid. In their consistency, it used to wide variety. the example on - chocolate media ^{agar} blood agar, pH change, alkalinity, ~~are~~ to increase the selectivity of the media.

Compatible solutes are small organic & electrolytes including sugar, polyols, amino acids, not including

biofilm is strong and dynamic structure which advantages to its members nutritional source, colour, zone