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.

(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 emperical 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.

2. Answer *any* **six** from the following questions : 5×6=30

(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.

(i) Write in brief the functional significance of microbes in aquafarming.

(j) 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 of - chocolate ~~media~~ agar ^ blood agar. PH energy alkalinity ~~of~~ to increase the selectivity of the media

Compatible solutes are small organic osmolytes including, not including sugar, polyols amino acid.

Biofilm is strong and dynamic structure which undergoes to its members nutritional source, colony zone