

**School of Agriculture****Bachelor of Science Honours in Agriculture  
Semester End Examination - Jun 2024****Duration : 180 Minutes  
Max Marks : 100****Sem IV - A1UA410T - AGRI2013 - Problematic Soils and their Management***General Instructions**Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

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|-----|---|--------|
| 1)  | Compare soil quality and soil health in brief.  | K1(2)  |
| 2)  | Interpret the role of land degradation in reducing crop productivity.   | K2(4)  |
| 3)  | Summarize the sources of salts in the soil and their effects.   | K2(6)  |
| 4)  | How would you solve the problem of soil alkalinity with the help of various chemical ameliorant?  | K3(9)  |
| 5)  | How would you solve the problem of acid sulfate soils by using various management practices?  | K3(9)  |
| 6)  | What criteria indicate soil compaction, hindering root penetration and water infiltration?  | K5(10) |
| 7)  | Distinguish between the roles of nitrogen-fixing trees, deep-rooted trees, and phytoremediators in soil bio-remediation processes.  | K4(12) |
| 8)  | Determine the Sulphur, sulphuric acid and limestone equivalence of gypsum for the management of sodic soil.   | K5(15) |
| 9)  | Justify, the implementation of conservation tillage practices as an effective strategy for reducing soil erosion while maintaining soil health and productivity.                              | K5(15) |
| 10) | Create a comprehensive plan for the management of flooded soils, elaborating on strategies for water drainage, soil aeration, and crop selection to mitigate damage and enhance productivity. | K6(18) |