MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) Agriculture

[Fifth Deans' Committee Recommended Syllabus]

Semester	: IV	Term	:	Second	Academic Year	:	2024-25
Course No.	: SSAC 242	Title	:	Problematic Soils and their Management			
Credits	: 2(1+1)						
Day & Date	: Wednesday, 23.04.2025	Time	:	9:00 to 11:00 hrs.	Total Marks	:	40

Note :
1. Solve ANY EIGHT questions from SECTION 'A'.
2. All questions from SECTION 'B' are compulsory.
3. All questions carry equal marks.
4. Draw neat diagram wherever necessary.

SECTION 'A'

Q.1 Define Land degradation. Classify degraded lands and explain any one of them.

Q.2 Define Soil quality indicators. Discuss physical soil indicators in detail.

Q.3 What is Soil erosion? Enlist the types of soil erosion and describe any one of them.

Q.4 Define Soil compaction. Discuss the control measures to avoid soil compaction.

Q.5 Define Calcareous soils. Discuss the properties of calcareous soils and their effects on physical and chemical properties of soils.

Q.6 What are Salt affected soils? Give the characteristic features of sodic soils.

Q.7 Define Water pollution. Give the sources of water pollution and remedies to control water pollution.

Q.8 Discuss the criteria for evaluation of irrigation water quality.

Q.9 Define Acid soils. Discuss different types of soil acidity.

Q.10 Write short notes on (Any Two):

a) Submerged soils b) Soil pollution c) Saline-sodic soils

SECTION 'B'

Q.11 State True or False:

1) Solonchak soil is the other name of alkali soil.
2) Irrigation water can be moderately safe having RSC 1.25 - 2.5 meq L^{-1}.
3) For amelioration of alkali soils, gypsum is used.
4) Acidity developed due to hydrogen and aluminium ions on the soil colloids, is known as reserve acidity.

Q.12 Match the pairs:

'A'	'B'
1) RSC	a) Soil quality
2) Available nutrients	b) Osmotic effect
3) Saline soils	c) Black alkali soils
4) Sodic soils	d) $(CO_3^- + HCO_3^-) - (Ca^{2+} + Mg^{2+})$

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