MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Horticulture

Semester	: **IV (New)**	**Term**	: **II**	**Academic Year**	: **2018-19**
Course No.	: H/SSAC 243	**Title**	: **Soil, Water and plant analysis**		
Credits	: 2 (1+1)				
Day & Date	: Thursday, 09.05.2019	**Time**	: 14.00 to 16.00	**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 diagrams wherever necessary.

SECTION "A"

Q.1 Write in detail objectives of soil and plant sample analysis.

Q.2 Enlist different methods of analysis of soil samples.

Q.3 Define isotopes. Write its application in soil fertility and plant nutrient studies.

Q.4 Explain in brief beneficial and harmful role of soil microorganisms.

Q.5 State the different types of mechanisms of transport of ions from soil to roots. Describe any one.

Q.6 Describe factors responsible for formation of acidic soil.

Q.7 State different methods of reclamation of saline soil.

Q.8 State the electrochemical changes occur in water logged soil.

Q.9 How does gaseous exchange takes place between soil and atmosphere?

Q.10 Define pollution. Write different kinds of soil pollutants.

SECTION "B"

Q.11 Do as directed.

1) Give the nam[illegible]nmobile nutrients in plants.
2) State the long form of DTPA.
3) State the methods employed for the analysis of green plant tissue for N.P and K.
4) Give the safe limit of RSC of irrigation water.

Q.12 Match the following pairs.

'A'	'B'
1) Acid soil	a) Gypsum
2) Sodic soil	b) Platinum electrode
3) Oxygen diffusion rate	c) Lime
4) Redox potential	d) Millivolts

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