

Dr. PANJABRAO DESHMUKH KRISHI VIDYAPEETH, AKOLA
SEMESTER END THEORY EXAMINATION
B.Sc. (Hons.) Horticulture

Semester	:	I (New)	Term	:	I	Academic Year	:	2021-2022
Course No	:	H/SSAC-111	Title	:	Fundamentals of Soil Science			
Credits	:	2=(1+1)						
Day& Date	:	Saturday 27/11/2021	Time	:	4.00-5.00	Total Marks	:	40

Note: 1) Solve ANY FOUR questions from SECTION-A

2) Solve ANY SIX questions from SECTION-B

3) All questions from SECTIONS –C are Compulsory

4) Send the PDF file of answer sheet to Email ID of respective course teacher

SECTION-A

(Write the answers in 4-5 sentences only. Each question carries 4 marks.)

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|------------|---|
| Q.1 | Define soil. State its composition and Write down Jenny's equation. |
| Q.2 | Define soil structure. State its type and importance. |
| Q.3 | Define soil texture and explain its importance in plant growth. |
| Q.4 | What is soil temperature? Describe in brief thermal properties of soil. |
| Q.5 | Explain in brief the formation of saline soil. |

SECTION-B

(Write the answers in one sentence only. Each question carries 2 marks.)

- Q.6** (Answer in one sentence/Do as directed /Define etc.)
1. Write down the major soil group of India.
 2. What is infiltration of water in soil?
 3. State stoke's law and its equation.
 4. Define Bulk density and particle density.
 5. What is used to test soil colour ? State the variable of soil colour.
 6. State the formula for soil porosity.
 7. Write down fundamental soil forming processes.

SECTION "C"

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|------------|---|-------------------|
| Q.7 | (Choose the correct option. Each question carries 1 mark.) | |
| | 1. The most permanent physical properties in the soil. | |
| | a) Structure | b) Consistency |
| | c) Texture | d) None of these. |

2. The process of water entry in to the soil through the surface is called as ...
 - a) Seepage
 - b) Percolation
 - c) Infiltration
 - d) All of these.
3. The particle density value of mineral soil is generally taken as
 - a) 2.65
 - b) 1.33
 - c) 2.85
 - d) 0.33
4. Illite is type of clay mineral
 - a) 2:1
 - b) 1:1
 - c) 3:2
 - d) 2:1:1
5. The process of removal of silica instated of sesquioxide is known as ...
 - a) Salinization
 - b) Solodization
 - c) Laterization
 - d) Pedoturbation
6. The sum of total exchangeable anion that soil can absorb is called as
 - a) AEC
 - b) CEC
 - c) Ion exchange
 - d) Ion substitution
7. Science that deals with soil genesis and classification is called as ...
 - a) Soil petrology
 - b) Soil pedology
 - c) Soil chemistry
 - d) Soil edaphology
8. The particle size 0.02 to 0.002 mm of which texture.
 - a) Clay
 - b) Loam
 - c) Silt
 - d) Sand
9. Accurate combination of sand silt and clay
 - a) Soil structure
 - b) Soil texture
 - c) Loam
 - d) Mixed soil
10. The p^H scale was given by....
 - a) Schofield
 - b) Atterberg
 - c) Liebig
 - d) Sorenson
11. In the soil loss equation $A = RKLSCP$, K is denoted as...
 - a) Erosion rate
 - b) Slope
 - c) Erosivity
 - d) Soil Erodibility
12. What is the proportion of organic matter in surface soil.
 - a) 15
 - b) 5
 - c) 50
 - d) 25.