

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
COLLEGE OF AGRICULTURE

B.Sc. (Hons.) Agriculture Summer 2018 - 19 Examination

Semester: 4

Date: 04/04/ 2019

Subject Code: 20103252

Time: 10:30 am to 1:00 pm

Subject Name: Problematic Soils and Their Management

Total Marks: 50

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.

1. Clay soil are referred assoil (05)
2. Salt affected soils occur in theregion.
3. If the soil pH is 5.5 than called
4. Water erosion istype of erosion.
5. Gypsum is commonly used forsoil.
6.Erosion is controlled by normal tillage.
7. Ammonium sulphate containN.
8.is used for reclamation of acid soil.
9. Acidic soil is commonly found inrainfall regions.
10. is commonly deficient in Acidic soils.

B. Multiple choice type questions. (Each of 0.5 mark)

(10)

1. Which Element are toxic effects refers of Saline-alkaline soil.
a) Ca c) Zn
b) Na d) B
2. Clay soil are made up of about _____% clay particles in soil
a) 35% c) 20%
b) 40 % d) 50%
3. Management of acid soils can be reclaimed by addition of
a) Gypsum c) Both a and B
b) CaCO₃ d) None of these
4. pH of spent wash is
a) 1.2 to 2.2 c) 4.2 to 5.2
b) 3.8 to 4.2 d) 6.2 to 6.4
5. Geological erosion is also known as
a) Soil erosion c) Accelerated erosion
b) Water erosion d) All of these
6. Deficiency of Ca and Mg are found in _____ soil
a). Sodic c). Alkali
b). Acid d). All above
7. Water logged area may be morestate
a). Andhra Pradesh c). Gujarat
b). West Bengal d). Haryana
8. The process by which the saline soil formed is called
a) Laterization c) both a and b
b) Salinization d) Acidification

9. The element which is measured by flame photo meter
 a) N c) S
 b) K d) All of these
10. Good soil tilth is a characteristic at
 a) problematic soil c) fertile soil
 b) healthy soil d) Productive soil.
11. Spectrophotometer is used for measurement of _____ nutrients
 a) Phosphorous c) a & b both
 b) Sulphur d) None of these
12. The Major deposit of gypsum is found in _____ state.
 a) Gujarat c) Madhya Pradesh
 b) Rajasthan d) None of these
13. Which of the following the first phase of water erosion_____.
 a) Sheet erosion (c) Rill erosion
 b) Splash erosion (d) Gully erosion
14. Near the canal banks soil become
 a) Acidic c) Calcareous
 b) Alkali d) All of Above
15. Which nutrient is available at neutral pH?
 a) P c) Fe
 b) N d) Al
16. If the application of Gypsum in acidic soil pH will be
 a) Increase c) Decrease
 b) constant d) None of these
17. When alkali soil also in submerged condition
 a) Flocculated c) A + B
 b) De-flocculated d) All of these
18. Soil have pH > 8.5, ESP > 15.0 and EC > 4.0 dS/m is also called
 a) Saline-sodic Soil c) Saline-Sodic soil
 b) Alkali Soil d) All of the above
19. The use of CaCO₃
 a) Saline Soil c) Acidic Soil
 b) Alkali Soil d) None of these
20. Clay soil are ___ in hydraulic conductivity.
 a) High b) Both a and b
 c) Very Low d) Medium

Q.2. Do as Directed.

(05)

A. Define the following. (Any five)

1. Acid Rain
2. Soil quality
3. Soil Pollution
4. Drainage
5. Wind Erosion
6. Saline soil
7. Water Pollution

B. Answer the following. (Any Five)

(05)

1. Define soil erosion?
2. Enlist factors causing soil erosion
3. How to formation of Acid soil?
4. Define Acid soil?

5. Define soil health?
6. Name the amendments for acid soils?
7. Explain types of soil degradation ?

Q.3 Write short notes. (Any five)

(10)

1. land capability class
2. Submerged soil.
3. Acid soil
4. Soil Alkali
5. Saline alkali soil
6. Importance of organic manures/fertilizers

Q.4 Attempt any Three/Long Questions/Example

(15)

1. What are multipurpose trees? Enlist the role of multipurpose trees on salt affected soil?
2. Define water pollution? Enlist the sources and their management?
3. How to reclaim alkali/sodic soil?
4. Define soil quality? Explain characteristics of healthy soil.