

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023  
(Second Semester)

Branch - ENVIRONMENTAL SCIENCE

**SOIL POLLUTION AND MANAGEMENT**

Time: Three Hours

Maximum: 50 Marks

**SECTION-A (5 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Rocks formed by cooling and solidification of molten rock (lava) are  
(i) Metamorphic rocks                      (ii) Igneous Rocks  
(iii) Sedimentary Rocks                      (iv) Modified Rocks
- 2 Processes that breakdown rocks into sediments, and soil are called  
(i) Weathering                                  (ii) Breaking  
(iii) Powdering                                  (iv) Leaching
- 3 Relative contents of particles of various sizes such as sand, silt and clay in the soil is called  
(i) Soil profile                                  (ii) Soil structure  
(iii) Soil content                                  (iv) Soil texture
- 4 Brays method is employed to determine \_\_\_\_\_ in soil.  
(i) pH    (ii) Organic matter  
(iii) Available Phosphorous                      (iv) Available Potassium
- 5 Afforestation means  
(i) removal of forests                      (ii) creating forests in non-forested area  
(iii) felling of trees                                  (iv) growing cash crops on land

**SECTION - B (15 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Illustrate the layers of the earth.  
OR  
b Classify the types of igneous rocks.
- 7 a Briefly explain mechanical weathering.  
OR  
b Show how mining activity pollutes soil.
- 8 a Explain any two physical properties of soil.  
OR  
b Discuss the importance of micronutrients in soil quality.
- 9 a Justify the need for soil analysis.  
OR  
b Explain the principle behind estimation of organic matter in soil.
- 10 a Explain any two types of soil degradation.  
OR  
b Discuss the significance of mine land reclamation.

Cont...

**SECTION -C (30 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** Marks

(5 x 6 = 30)

11 a Enumerate the processes in the formation of landforms.

OR

b Categorize the elements based on geochemistry.

12 a Outline the various ecosystem services of soil.

OR

b Elucidate the importance of soil microorganisms on soil decontamination.

13 a Categorize soil types based on its texture.

OR

b Elucidate the importance of soil colloids.

14 a Explain method of collection, preparation and preservation of soil samples for soil analysis.

OR

b Explain steps in soil available nutrient extraction using DTPA.

15 a Categorize the various remediation methods pertaining soil heavy metals with examples.

OR

b Recommend the methods of controlling soil erosion.

Z-Z-Z

END