

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Agricultural & Plantation
Engineering

030



Study Programme	: Bachelor of Industrial Studies Honours (Agriculture)
Name of the Examination	: Final Examination
Course Code and Title	: AGX6490-Soil and Water Conservation
Academic Year	: 2023/2024
Date	: 17-02-2025
Time	: 0930-1230hrs
Duration	: 3 hours

Registration No :



INSTRUCTIONS

- This question paper consists of two sections. SECTION I and SECTION II

SECTION 1

- There are FIFTEEN (15) Structured Essay Questions. You are required to answer all questions. Answers should be written in the space provided for each question. No additional paper is provided. You may spend about one hour to answer this section.

SECTION 2

- There are SIX (06) Essay Type Questions. You are required to answer ONLY FOUR (04) questions. You may spend about two hours to answer the questions in this section.

Read the questions carefully before answering.

It is **EXTREMELY IMPORTANT** that you should not remove the **SECTION I** of the question paper from the examination hall.

Please note that you should write your registration number in the space provided above. Do not write your name.

SECTION 1: Answer all questions. Use the space given under each question.

1. What is meant by Rain splash erosion?

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2. Briefly explain the stream channel erosion.

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3. List four (04) methods to control wind erosion on agricultural lands.

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4. List five (05) factors influencing credibility.

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5. Name **five (05)** factors responsible for erosion in Tea lands.

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6. Define "Time of concentration" and write the equation developed by Kirpich (1940) and name the variables.

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7. Define "Froude Number".

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8. List five (05) Grasses which can be used for soil conservation

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9. Name **three (03)** ways of planting trees in avenue cropping and their advantages and disadvantages.

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10. Name **three (03)** methods to reduce evaporation from water surface.

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11. Name **three (03)** types of surveys used to assess soil erosion at semi-detailed level.

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12. State **three (03)** social factors which inhibit the success of soil conservation programmes.

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13. List **five (05)** triggers of landslides.

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14. State **five (05)** methods to reduce evaporation from the soil surface.

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15. What is meant by "Hydrophilic soil amendment".

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SECTION II : Answer any **four** (04) questions. All questions carry equal marks.

- (1) Briefly explain the effects of wind erosion.
- (2) (a) Define the term "Erosivity".
(b) Briefly explain the estimation of erosivity.
- (3) Briefly explain the Channel erosion and design of channels.
- (4) (a) What is the nature of Gully erosion?
(b) Briefly describe the causes of Gully erosion and its control.
- (5) (a) Describe the principal types of floods in Sri Lanka
(b) Briefly discuss the effects of floods and how can you control floods and minimize the aftereffects of floods in communities.
- (6) Write short notes on any **three** (03) of the following.
 - (a) Landslide
 - (b) Soil Conservation in Coconut Lands
 - (c) Zero tillage
 - (d) EI index

End of Paper