



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 5th Semester Examination, 2023

DSE-P2-TEA SCIENCE

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

**The question paper contains Paper-I and Paper-II.
The candidates are required to answer any *one* from *two* Papers.
Candidates should mention it clearly on the Answer Book.**

PAPER-I

TEA PHARMACOLOGY

1. Answer any **five** from the following: 1×5 = 5
- (a) How much percentage of moisture reduced during withering?
 - (b) What is the amount of caffeine in black tea?
 - (c) What do you mean by Catechins?
 - (d) What are free radicals?
 - (e) What do you mean by antioxidants?
 - (f) Give example of a phenol present in tea leaves.
 - (g) What is theogallin?
 - (h) Write the ratio of TF and TR in black tea.
2. Answer any **three** from the following: 5×3 = 15
- (a) Write a short note on the volatile flavour compound of tea.
 - (b) Explain the biochemical basis of quality of tea.
 - (c) Explain in brief about the antioxidant effect of tea.
 - (d) Write a short note on the tea polyphenols.
 - (e) Briefly explain the method of tea tasting.
3. Answer any **two** from the following: 10×2 = 20
- (a) Write a detailed account on the chemical composition of tea leaves.
 - (b) Describe the basic chemistry of tea catechins.
 - (c) Describe the biochemical changes during processing of black tea.
 - (d) Describe the volatile flavour components present in tea leaves and explain its role on tea quality.

PAPER-II

NATURAL RESOURCE MANAGEMENT

1. Answer any *five* from the following: 1×5 = 5
- (a) Name any two wastes which can be recycled and reused.
 - (b) Give one protective function of forest.
 - (c) What do you mean by Carbon Stock?
 - (d) What is 'Sustainable agriculture'?
 - (e) Mention any two methods of Soil Conservation.
 - (f) Identify two local industries which pollute the local water bodies by throwing untreated sewage.
 - (g) Which gas is produced due to incomplete combustion of fossil fuels?
 - (h) What is biodiversity hot-spot?
2. Answer any *three* from the following: 5×3 = 15
- (a) List five advantages of water stores in the ground as "ground water". 5
 - (b) What are the threats of Biodiversity? 5
 - (c) Briefly explain about sustainable utilization of natural resources. 5
 - (d) How does mining disturb ecological balance? 5
 - (e) Why are forests considered "biodiversity hot spots"? List two ways in which an individual can contribute effectively to the management of forests and wildlife. 1+4
3. Answer any *two* from the following: 10×2 = 20
- (a) Explain about different types of major and minor forest products. 5+5
 - (b) Why should we conserve forests and wildlife? Explain. 10
 - (c) Explain about different types of natural resources with suitable examples. 10
 - (d) Write short notes on: 5+5
 - (i) Sustainable development.
 - (ii) Waste management.

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