

**CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR
WOMEN, NUVEM**

SEMESTER END EXAMINATION, JANUARY, 2022

SEMESTER III of B.Sc (SEC)

CHS101 NATURAL RESOURCES AND ANALYSIS

Time:2hrs Date:

Total Marks:60

Q.1) Answer any ten of the following:

(2x10=20marks)

- i) Classify fuels on the basis of their occurrence and physical state.
- ii) What do you mean by Low Calorific Value (L.C.V) and High Calorific Value (H.C.V)?
- iii) Comment on the composition of coal.
- iv) How is coal gas obtained? What are its uses?
- v) Discuss the uses of blue gas and its composition.
- vi) What are the different steps involved in petroleum refining?
- vii) Name any two petroleum products and their respective uses.
- viii) Write a note on fractional distillation.
- ix) What is the primary objective of maintaining a proper nutrition.
- x) What are the common adulterants used in Turmeric and how they can be identified?
- xi) Write a short note on classification of soil particles based on their sizes.
- xii) What are Metal Ion Indicators? Give Examples.
- xiii) Define Water Pollution.
- xiv) Differentiate between carbonate hardness and non-carbonate hardness.

- Q.2.A)** i) Comment on the fuel and non-fuel uses of coal. (3)
ii) What is cracking of petroleum? Explain its types. (2)

OR

- Q.2.A)** iii) Write a short note on Liquefied Petroleum Gas. (3)
iv) What is coal gasification? (2)

- Q.2.B)** i) What do you understand by High Temperature Carbonisation and Low Temperature Carbonisation? (3)
ii) Why there is a need for reforming of petroleum? (2)

- Q.3.A)** i) Explain the different types of Adulteration. (3)
ii) How water pollution can be kept under control? (2)

OR

- Q.3.A)** i) Differentiate between Class I and Class II types of preservatives. (3)
ii) Maintaining an alkaline pH is very important for complexometric titrations. Why? (2)

- Q.3.B)** i) Explain briefly the Soil Profile. (3)
ii) What are the essential requirements for drinking water. (2)

- Q.4.A)** i) Discuss on any 3 different types of water pollutants. (3)
ii) Define Soil Porosity and Soil Permeability. (2)

OR

- Q.4.A)** iii) Write a short note on BOD. (3)
iv) What are Synthetic fuels? (2)

Q.4.B) i) Write a note on the organic components present in the soil. (3)

ii) What is Coagulation and Flocculation. (2)

Q.5.A) i) Explain the following methods briefly. (3)

a) Refrigeration

b) Pickling

c) Pasteurization

ii) What is the significance of Dissolved Oxygen in water. (2)

OR

Q.5.A) iii) Discuss the distillation of coal tar. (3)

iv) What are the advantages of using Biogas. (2)

Q.5.B) i) How does Industrial and Urban waste result in soil pollution. (3)

ii) What is the aim of food processing? (2)

*****ALL THE BEST*****

C. Alvarez
21/2/2021