

NORTH GAUHATI COLLEGE
DEPARTMENT OF PHYSICS
B.SC. 3RD SEMESTER (GENERAL) NON-CBCS
SUB: THERMODYNAMICS (301)
ASSIGNMENT - I

LAST DATE OF SUBMISSION: August 10, 2021

TOTAL MARKS: 15

The figures in the brackets indicate the full marks for each question

- 1.** Define intensive and extensive properties with two examples each. [3]
- 2.** What are the four types of thermodynamic processes? Support your answer with graphical representation. [4]
- 3.** One mole of a perfect gas expands adiabatically. As a result of this, its pressure, temperature and volume change from (P_1, T_1, V_1) to (P_2, T_2, V_2) respectively. If the molar specific heat at constant volume is C_v , then calculate the work done in this process. [4]
- 4.** Explain the Carnot cycle with a proper diagram. [4]

General instructions for submission:

- ★ Write your answers in **A4 size paper** clearly mentioning your **name, GU roll number, registration number, paper code, email address**, etc. on the **first page** of your answer sheets.
- ★ You need to make a **single PDF file** of your assignments and **upload** them on the **online portal of our college** (by clicking the 'upload' button next to the 'view' button on the assignment page).
- ★ Only if you are **unable to upload** on the website, you may send the assignment mentioning proper **course code and assignment number as subject** to the email: **ngcphysicsdept@gmail.com**