

B.Sc 3<sup>rd</sup> sem (CBCS) Sessional Exam, 2021

Sub: Physics (Generic)

Paper: PHY-HG/RC - 3016  
Thermal physics & Statistical  
Mechanics.

Time: 1 hour

Full Marks: 20

1. Answer any five from the following questions:

- Define Temperature.
- Define Internal Energy.
- What is an isothermal process?
- What is an adiabatic process?
- What is irreversible process in thermodynamics?
- Write the zeroth law of thermodynamics.
- Write one condition for process to be reversible.

2. Answer any three from the following questions:

- Derive the relation  $C_p - C_v = R$ .
- Explain the following process:  
(a) Cyclic Process (b) Isochoric Process (c) Isobaric Process
- Find the expression for work done during an isothermal process.
- State and derive the first law of thermodynamics.

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