

# **B.B.M. COLLEGE BALIAPUR**

**(DHANBAD)**

**Internal Exam (3<sup>rd</sup> Sem) 2026**

**Session – 2024-2028**

**Class – BS.C (Hons) (SCIENCE - Physics)**

**Sub. – Major – 04 (Time – 1.0 Hr.)**

**F.M. - 10 +(CAS+DDA) 5 = 15**

---

## **GROUP-A**

**1. . answer the following question**

**A) What is the principal of carnot's engine ?**

b) what is entropy?

c) Define wien's displacement law.

d) what is principal of increase entropy?

e) What is enthalpy?

2. Derive Classius Clapeyron equation.

## **GROUP-B**

Answer any one question

3. What is mean free path? Find the expression for mean free path.

4. State the second law of thermodynamics. Describe carnot's cycle and deduce the efficiency of an ideal heat engine .

# **B.B.M. COLLEGE BALIAPUR**

**(DHANBAD)**

**Internal Exam (3<sup>rd</sup> Sem) 2026**

**Session – 2024-2028**

**Class – BS.C(Hons) (SCIENCE - Zoology)**

**Sub. – Minor– 1B (Time – 1.0 Hr.)**

**F.M. - 10 +(CAS+DDA) 5 = 15**

---

## **GROUP-A**

**1. answer the following question**

**a) Define electric flux?**

b) what is poynting vector?

c) Define lenz's law?

d) what is divergence of magnetic field?

e) what is capacity of a conductor?

2. State and prove Amper's circuital law.

or

3. Derive the expression for capacity of a parallel plate capacitor completely filled with dielectric.

# **B.B.M. COLLEGE BALIAPUR**

**(DHANBAD)**

**Internal Exam (3<sup>rd</sup> Sem) 2026**

**Session – 2024-2028**

**Class – BS.C(Hons) (SCIENCE - Zoology)**

**Sub. – Minor– 1C (Time – 1.0 Hr.)**

**F.M. - 10 +(CAS+DDA) 5 = 15**

---

## **GROUP-A**

### **1. Answer all questions.**

- A) Define Rayleigh-jeans law?
- b) Define zeroth law of thermodynamics.
- c) what is mean free path?
- d) What is black body radiation?
- e) Define entropy.

## **GROUP-B**

- 2.** Derive the expression for work done during isothermal and adiabatic processes.
- 3.** Derive Maxwell's law of distribution processes.

or

Derive Maxwell's law of distribution of velocity and its experimental verification.