

Questions for Internal exam

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B. Sc. Physics (Hons) Sem 1 (2020-2023)

Core paper (1)

Answer any two questions

2 X 5 = 10

- (1) Describe the method for solving a first order differential equation. Define Integrating factor.
- (2) Define gradient of a scalar field and explain its geometrical interpretation.
- (3) State and prove Gauss divergence theorem.
- (4) What is a differential equation? What do you mean by its order and degree. Also explain Homogeneous and Non-homogeneous differential equations.

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B.Sc. Sem 1 phys (Hons) (2020-2021)

Core paper (2)

Answer any two questions

2x5 = 10

- ① Define Surface Tension, Surface Energy and angle of Contact.
- ② Derive the Poiseuille's formula for the determination of Coefficient of viscosity of a liquid.
- ③ Derive with theory the determination of Coefficient of viscosity of a gas by Rankine's Method.
- ④ Derive the expression for the torsional Rigidity of a cylindrical wire.

Inkond questions for B.Sc. physics (Hons.)

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Sem I (2020-2023)

Subject - physics Core practical

Answer any one question Full Marks (10)

- (1) Determine the value of 'g' in the laboratory using Kater's pendulum
- (2) Determine the value of 'g' in the laboratory using bar pendulum
- (3) Determining the young modulus of the material of a beam by bending of beam method