

# Intermed exam questions

B.Sc. Sem 1 (2021-2024)

Core paper 1

2x5 = 10

Answer any two questions

- ① Define scalar and vector fields.
- ② What is a differential equation? What are linear and non-linear differential equations?
- ③ What is the method for solving a first order differential equation?
- ④ State and prove Gauss Divergence theorem.
- ⑤ State and prove Stoke's theorem.

## Question for Internal exam.

B.Sc. physics (Hons) Sem 1 (2021, 2022)

Core paper (2)

Answer any two questions

2x5=10

- (1) Establish relations between different elastic constants.
- (2) Derive the expression for depression produced in a beam when it is supported at both the ends and loaded at middle.
- (3) Find the expression for torsional rigidity of a cylindrical rod or wire.
- (4) What do you mean by viscosity of a liquid. Derive the expression for the coefficient of viscosity of a liquid by Poiseuille's formula method.

# Questions for practical exam

Modimate

Date \_\_\_\_\_

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B.Sc. Sem IV (2021-2024)

Subject - physics core practical

Full marks - (10)

Answer any one question

- ① Determine the value of 'g' Acceleration due to gravity in laboratory using Kater's pendulum.
- ② Determine the value of 'g' Acceleration due to gravity in laboratory using bar pendulum.
- ③ Determine the value of diffusion constant of the given wire material by Sear's Apparatus.