

1st Sessional Exam, 2021

B.Sc. 1st Sem.

Sub : Physics. (Honours).

Paper : PHY-HC-1016

Full Marks 20

Time : 45 min

- 1. Prove that $A = 3\hat{i} + 4\hat{j} + \hat{k}$ and $\vec{B} = \hat{i} - \hat{j} + \hat{k}$ are perpendicular to each other. ②
- 2. Find the Gradient of a Scalar function. ①
- 3. Prove that $\nabla \times (\vec{A} \times \vec{B}) = \nabla \times \vec{A} + \nabla \times \vec{B}$. ①
- 4. State and Prove Stock's Theorem. ①
- 5. Define Scalar and Vector Fields, with examples. 2+2+2 = ⑥