

W-3256(A)

M.Sc. (Fourth Semester) Examination, (Second Chance) June-2020

PHYSICS

Paper - PT-404-B

Material Science-II

Time : Three Hours

Maximum Marks : 85

Minimum Pass Marks : 29

Note : Attempt **all** questions.

- Q1. Write short notes on the following.
- Homogenous nucleation of dislocation.
 - Creeps and its mechanism.
- Q.2. State and explain the concept of Mathiesson's rule for resistivity. Give its advantages.
- Q.3. Explain the mechanism of oxidation. What is oxidation-resistant materials?
- Q.4. Describe the following.
- Plasma oscillation in free electron gas.
 - Hartree-Fock approximation.
- Q.5. Write note on :
- Energy gap in a superconductor.
 - Isotope effect.
 - A.C. Josephson effect.

