JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2023

Ph.D-I Semester (PMS)

COURSE CODE (CREDITS): 21P1WPH132 (03)

COURSE NAME: Thin Films

COURSE INSTRUCTORS: HAZ

MAX. MARKS: 35

MAX. TIME: 2 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

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Q1. Discuss Fick's first and second laws of diffusion with respect to suitable applications.

[6-marks]

Q2. Discuss the homogeneous nucleation and the subsequent growth of metallic nanoparticles.

[7-marks]

Q3. For the growth of copper thin film on a substrate, discuss a model for its deposition.

[7-marks]

Q4. Write short notes on: (i) Arrhenius activation energy (ii) Magneto resistance (iii) Seeback effect (iv) Substrate cleaning (v) Lattice strain

[3x5=15 marks]