

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

Ph.D Semester-I (PMS)

COURSE CODE (CREDITS): 21P1 WPH132 (3)

MAX. MARKS: 25

COURSE NAME: THIN FILM

COURSE INSTRUCTORS: Dr. P.B. Barman

MAX. TIME: 1 Hour 30 Min

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

- Q1. Discuss the various gas phase and liquid phase thin film deposition techniques. [3]
- Q2. According to your understanding of thin films write the significance of substrate properties. [3]
- Q3. Grain growth and grain size essentially depend on which parameters. Give the mathematical support for your answer. [3]
- Q4. Write the basic difference between rotary and diffusion pumps. Why diffusion pump is always being backed by rotary pump? [4]
- Q5. Moderate heating rate is preferable during thermal deposition. Justify the statement. [3]
- Q6. Discuss the functioning of quartz thickness monitor. [3]
- Q7. What are the possible ways for maintaining stoichiometry in thin films deposited by thermal evaporation technique? [3]
- Q8. Write the significance of phase diagram in selecting the composition of alloys. [3]