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PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch-**PHYSICS**

CORE ELECTIVE : I CRYSTAL GROWTH. THIN FILMS & PLASMA PHYSICS

Time: Three Hours Maximum: 75 Marks

Answer ALL questions
ALL questions carry EQUAL marks (5 x 15 = 75)

1 a Elaborately explain the Bravis and Kossel theory. Write a note on Stranski's treatment.

OR

b Discuss in detail about the methods of finding growth rate.

2 a Explain in detail the BCF theory of crystal growth.

OR

b Explain the zone melting and Vemeuil method with suitable diagram.

3 a Describe the chemical vapor transport. Discuss in detail about the preparation of thin films in evaporation methods.

OR

b Elaborately explain the electrode less deposition and list the advantages and disadvantages of it.

4 a Explain the microbalance monitors by Electrical methods and optical interference method by mechanical method in detail.

OR

b Describe the thin film resistors and capacitors in detail. With neat sketch explain Tribological coating.

5 a Classify the plasma in detail. List the applications of plasma physics.

OR

b Write a note on concept of temperature. Explain the working principle of plasma diode and write its applications.

Z-Z-Z END