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**07/PG/3S/PHS/396A/21
2021**

M.Sc.

3rd Semester Examination

PHYSICS

Paper-PHS 396A

Full Marks: 50

Time: 2 Hours

The Figures in the right hand margin

Indicate full marks.

Candidate are required to give their
answers in their own words as far as
practicable.

Illustrate the answers wherever
necessary.

Solid State (Practical)

Marks-Distribution:

Experiment: 50

Answer any two.

25 × 2 = 50

- 1) Determination of Lande g-factor for the given sample using electron spin resonance spectrometer.
 - a) Theory (08)
 - b) Experimental Procedure.(15)
 - c) Discussion.(02)

- 2) Study of Characteristics of the solar cell
 - a) Theory (08)
 - b) Experimental Procedure.(15)
 - c) Discussion.(02)

- 3) Study of magneto-resistance of the given sample.
 - a) Theory (08)
 - b) Experimental Procedure.(15)
 - c) Discussion.(02)

- 4) Measurement of magnetic susceptibility and bohr magneton number of given sample by Gouy method.
 - a) Theory (08)
 - b) Experimental Procedure.(15)
 - c) Discussion.(02)

- 5) Study of UJT and SCR Characteristics.

SCR

- a) Theory (7.5)
- b) Experimental Procedure.(15)
- c) Discussion.(2.5)

UJT

- a) Theory (7.5)
- b) Experimental Procedure.(15)
- c) Discussion.(2.5)