FACULTY OF SCIENCES

SYLLABUS

FOR

INTERDISCIPLINARY COURSE IN PHYSICS (PG)

Examinations: 2019 - 20

Note:  
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Please visit the University website time to time.
Interdisciplinary Course in Physics (PG)

For Postgraduate even or odd semesters
CHARACTERIZATION TECHNIQUES

Course No. LTP
PHL-051 4 0 0

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section-A
Scanning electron for element detection with concentration; Auger electron spectroscopy (AES), X microscopy, Transmission electron microscopy, Scanning tunneling microscopy, Atomic force microscopy, Optical microscopy.

Section-B
X-ray diffraction, data manipulation of diffracted X-rays for structure determination; X-ray fluorescence spectrometry -ray photoelectron spectroscopy (XPS)

Section-C
Secondary ion mass spectroscopy (SIMS) techniques for the analysis of surfaces, DTA, TGA and DSC measurements and analysis of the curves.

Section-D

Recommended Books:
2. Culity