

Course: PYL725 (Surface Physics and Analysis), IInd Sem., 2018-2019

Minor-I: Thursday, 2.30 – 3.30 PM, Date: 07/02/2019, Total marks = 20.

(Note: Attempt all the questions, marks are given in parentheses.)

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- Q.1: What do you mean by the surface & why is it important to study? Give examples. (2)
- Q.2: Explain the basic principle of photoemission. (3)
- Q.3: Explain different contributions in the total energy resolution of XPS. (3)
- Q.4: How to clean the surface under ultra-high vacuum? (3)
- Q.5: How to find the valence state of an element using XPS? Explain with one example. (2)
- Q.6: Write five bravais lattices in two dimensions with figure and parameters. (3)
- Q.7: Discuss Wood's and matrix notation with examples. (4)