

Name: \_\_\_\_\_

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### Analytical Chemistry II – Quiz (6<sup>th</sup> May, 2025)

1) Describe the working principle of quadrupole mass analyzer.

Quadrupole consists of four metal rods. The opposing rods are connected electrically. The pairs of rods are supplied with DC and RF potentials simultaneously. At a specific combination of DC and RF potential magnitudes, ions with one  $m/z$  are passed from ion source to detector. If the DC and RF potentials are ramped up, one can pass the ions of increasing  $m/z$ . This way, one can record entire mass spectrum.

2) Draw schematic diagram of laser ablation sample-introduction system for mass spectrometry.

