Lecture 3.12 Quiz
Principles of Electronic Nanobiosensors
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Answer the **five questions** below by choosing the **one, best answer**.

1) The operation of flexure-FET relies on:

   a) Change in the mass of the beam following capture of biomolecules.
   b) Change in the spring constant following the capture of biomolecules.
   c) Change in the damping coefficient following the capture of biomolecules.
   d) Change in surface reflection of the cantilever following the capture of a biomolecule.

2) A flexure FET provides highest sensitivity, when transistor is operated in the:

   a) Inversion mode.
   b) Subthreshold mode.
   c) Accumulation mode.
   d) Percolation mode.

3) A flexure FET requires:

   a) A reference electrode.
   b) A counter electrode.
   c) An auxiliary electrode.
   d) None of the above.

4) The settling time of a cantilever based biosensor is:

   a) Identical to that of a potentiometric sensor.
   b) Still limited by diffusion of molecules to the sensor surface.
   c) Is dictated by the shape of the cantilever.
   d) All of the above.

5) The very high sensitivity of a flexure-FET arises from the following feature of the sensor.

   a) It does not suffer from screening limits.
   b) It does not need a reference electrode.
   c) There is no redox reaction on the sensor surface.
   d) Displacement can be measured far more easily compared to charges or current.

End of quiz. This quiz contains 5 questions.