1) If an electrochemical system is unstable, the effects manifest in impedance spectra mainly at

- high frequencies
- mid frequencies
- low frequencies
- all of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
low frequencies

2) Instability effects in EIS data can be identified using ______

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) KKT
(Type: String) KKT validation
(Type: String) KKT validation

3) Empirical evidence suggests that direct integration of KKT relations will not flag EIS acquired under large signal conditions, if

- current potential relationship is exponential
- current potential relationship is linear
- both of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
1 point
0 points
4) In case of reaction with adsorbed intermediates, when there is repulsion between the adsorbed species, it is best described by
- Langmuir isotherm
- Temkin isotherm
- Frumkin isotherm
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Frumkin isotherm

5) In case of reaction with adsorbed intermediates, when some sites are energetically favorable compared to other sites, it is best described by
- Langmuir isotherm
- Temkin isotherm
- Frumkin isotherm
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Temkin isotherm

6) In a given system, EIS was acquired at multiple perturbation amplitudes, and all of them yielded same data. Therefore, the system response can be considered linear and higher harmonics are negligible
- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers:
False

7) Even if there is no reaction at a particular condition in a given system, second harmonics can arise if double layer is described by
- Helmholtz model
- Gouy-Chapman model
- Stern model
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Gouy-Chapman model
Stern model

8) In NLEIS, primary response coefficients (PRC)
- Increase with $E_{ac0}$
- Decrease with $E_{ac0}$
- Can increase or decrease with $E_{ac0}$
9) Corrosion current can be obtained using 1 point
- Tafel extrapolation
- EIS
- Electrochemical Frequency Modulation
- Linear Polarization

No, the answer is incorrect.  
Score: 0

Accepted Answers:
Tafel extrapolation
Electrochemical Frequency Modulation

10) Standard Tafel extrapolation assumes that the contribution of the following to the measured 1 point current is negligible
- Solution resistance
- double layer capacitance
- cathodic reaction
- anodic reaction

No, the answer is incorrect.  
Score: 0

Accepted Answers:
Solution resistance
double layer capacitance