Assignment - 10

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2019-04-10, 23:59 IST.

1) If a porous insulating film is present on an electrode surface, the film component may be modeled with a

- capacitor in parallel with a resistor
- simple resistor
- capacitor in parallel with a series combination of resistor and Warburg impedance
- a simple capacitor

No, the answer is incorrect.
Score: 0
Accepted Answers:
capacitor in parallel with a resistor

2) A perfectly insulating film on an electrode surface is best modeled as a _______

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

3) In point defect model, the two types of defects are vacancies and __________

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

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5) As per PDM, cation interstitials are consumed a

- metal-film interface
- film-solution interface
- both of the above
- none of the above

No, the answer is incorrect. Score: 0

Accepted Answers:
- metal-film interface
- film-solution interface

6) During anion vacancy creation, the film thickness remains constant

- True
- False

No, the answer is incorrect. Score: 0

Accepted Answers:
- False

7) As per PDM, the potential drop across metal-film interface depends on

- film thickness
- solution pH
- both of the above
- none of the above

No, the answer is incorrect. Score: 0

Accepted Answers:
- both of the above

8) PDM employs the following equation to describe mass transfer in film

- Fick's second law in one dimension
- Fick's second law in two dimensions
- Nernst Planck equation
- Fromhold-Cook equation

No, the answer is incorrect. Score: 0

Accepted Answers:
- Nernst Planck equation

9) PDM employs the following assumption, to describe mass transfer within the film

- film is a continuous medium
When a film is present on electrode surface, sometimes, an inductive loop at mid frequencies is seen in the complex plane plot of EIS data. This can be described using:

- PDM
- SCA
- AIC
- all of the above

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