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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » [Quantitative Methods in Chemistry \(course\)](#)
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## Unit 11 - Week 8

### Course outline

How does an NPTEL online course work?

Week 0

MATLAB

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

- Standards and Volumetric/Gravimetric titrations - Part 01 (unit? unit=81&lesson=84)

## Assignment 8

The due date for submitting this assignment has passed. **Due on 2020-03-25, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) Which of the following is/are not primary standard: **1 point**

- Oxalic acid
- Hydrochloric acid
- Benzoic acid
- Ferrous sulfate
- Sodium thiosulfate

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*Hydrochloric acid*

*Ferrous sulfate*

*Sodium thiosulfate*

2) The response factor for an instrument in which 5.7 mM standard gave an absorbance value of **1 point** 0.414, and 2.9 mM analyte gave an absorbance value of 0.238 will be:

- 0.885
- 0.987
- 1.152
- 1.129
- 1.219

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*1.129*

- Standards and Volumetric/Gravimetric titrations - Part 02 (unit? unit=81&lesson=85)
- Standards and Volumetric/Gravimetric titrations - Part 03 (unit? unit=81&lesson=86)
- Standards and Volumetric/Gravimetric titrations - Part 04 (unit? unit=81&lesson=87)
- Standards and Volumetric/Gravimetric titrations - Part 05 (unit? unit=81&lesson=88)
- Quiz : Assignment 8 (assessment? name=83)**
- Quantitative Methods in Chemistry : Week 8 Feedback Form (unit? unit=81&lesson=89)
- Lecture materials (unit? unit=81&lesson=125)
- Assignment 8 solutions (unit? unit=81&lesson=130)

**Week 9****Week 10****Week 11****Week 12****Download Videos****Text Transcripts**

3) Indicator(s) that will be most appropriate when titrating 50 mL of 0.050 M ammonium hydroxide with 0.1 M HCl will be:

**1 point**

- Phenolphthalein
- Bromophenol blue
- Phenol red
- Bromocresol green
- Methyl red

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*Bromophenol blue*

*Bromocresol green*

*Methyl red*

4) Which of the following indicators can be used when titrating 0.1 M NaOH and 0.1 M HCl:

**1 point**

- Phenolphthalein
- Phenol red
- Methyl red
- Bromothymol blue
- All of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*All of the above*

5) For obtaining uniform particles, the following is/are needed:

**1 point**

- Nucleation and growth should happen simultaneously
- Nucleation period should be short and separate from growth period
- Nucleation period should be long and growth period should be short
- Relative supersaturation value should be very high
- Relative supersaturation value should remain low

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*Nucleation period should be short and separate from growth period*

*Relative supersaturation value should remain low*

6) Which of the following will result in polydisperse or non-uniform particles:(multiple options possible)

**1 point**

- Slow addition of precipitating reagents
- Fast addition of precipitating agents
- Maintaining low supersaturation values during precipitation
- Maintaining high supersaturation values during precipitation
- In situ generation of precipitating agent

No, the answer is incorrect.  
Score: 0

Accepted Answers:

*Fast addition of precipitating agents*

*Maintaining high supersaturation values during precipitation*

7) When 0.1 M  $\text{AgNO}_3$  is added to a solution containing thiocyanate and phosphate anions, we observe that: **1 point**

- Silver phosphate ( $\text{Ag}_3\text{PO}_4$ ) precipitates first, followed by silver thiocyanate
- Silver thiocyanate ( $\text{AgSCN}$ ) precipitates first, followed by silver phosphate
- Both silver phosphate and silver thiocyanate precipitate together
- $\text{AgNO}_3$  precipitates in this condition
- We get a uniform solution containing  $\text{Ag}^+$ ,  $\text{SCN}^-$ ,  $\text{PO}_4^{3-}$ ,  $\text{NO}_3^-$  ions

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Silver phosphate ( $\text{Ag}_3\text{PO}_4$ ) precipitates first, followed by silver thiocyanate*

8)  $\text{AgNO}_3$  (0.1 M, 10 mL) is titrated with sodium cyanide (0.1 M). If the solubility product ( $K_{\text{sp}}$ ) for silver cyanide is  $5.97 \times 10^{-17}$ , the  $\text{p}[\text{Ag}]$  value at equivalence point will be: **1 point**

- 8.12
- 9.20
- 16.22
- 4.60
- 10.05

No, the answer is incorrect.

Score: 0

Accepted Answers:

*8.12*

9) Mond process of purifying Ni metal from its ore can be considered as: **1 point**

- Precipitation
- Volatilization
- Solubilization
- Dehydration
- Crystallization

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Volatilization*

10) When making Copper sulfide particles, the sulfide source that is/are expected give the most uniform particles will be: **1 point**

- Sodium sulfide at high temperature
- Hydrogen sulfide at high temperature
- Thiourea at high temperature
- Thioacetamide at high temperature
- Iron sulfide at low temperature

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Thiourea at high temperature*

*Thioacetamide at high temperature*

