

Questions for Mock test T.Y.B.Sc Sem V (ATKT) Analytical Chemistry

- In the titration of Fe (II) vs Ce (IV), the number of electrons involved is _____.
a) One b) Five c) Eight d) Three
- An acidic medium is used for Fe (II) vs. KMnO_4 titration because _____.
a) H^+ Ions take part in reaction
b) pH needs to be high
c) Titration needs acid as a solvent
d) None of these
- Ferrouin is the indicator for the titration of Fe (II) vs. _____.
a) Ce (III) b) Ce (IV) c) KMnO_4 d) $\text{K}_2\text{S}_2\text{O}_8$
- An acid mixture is used in the titration of Fe (II) vs. $\text{K}_2\text{Cr}_2\text{O}_7$ when indicator used is
. a) Diphenyl amine
b) Phenol red
c) Methyl red
d) Starch
- The end point in Fe (II) vs. KMnO_4 titrant is
. a) Pink to colourless
b) Colourless or pale green to pink
c) Colorless to blue
d) Yellow to Red
- EDTA forms _____ complexes with almost all metal ions.
a) 6 : 1 b) 1 : 3 c) 1 : 1 d) 2 : 5
- EDTA titrations can be used as a back titrations method for metal cations that react _____ with EDTA. a) Rapidly b) Exhaustively c) Slowly d) badly
- pH control of solution containing several metal cations is a method to improve _____ of EDTA as a titrant.
a) Reactivity b) Poisoning nature c) Denticity d) Selectivity
- For Zn (II) – EDTA titrations, _____ is used as indicator. a) Eriochrome black T
b) Ferrouin
c) Starch
d) Phenol red
- Murexide is commonly used for titrating a solution containing _____ ions with EDTA.
a) Ca (II) b) La (III) c) Ce (IV) d) Fe(III)

11. Flame photometry is extensively used for estimation of
 . a) Alkali and alkaline earth metals
 b) Transition metals
 c) Lanthanides
 d) Rare earth metals
12. By knowing the wavelength of the emitted radiations, we can do
 . a) Qualitative estimation
 b) Quantitative estimation
 c) both (a) and (b)
 d) none of these
13. The nebulizer converts the sample solution into a _____.
 a) Solid b) gas c) aerosol d) gel
14. In estimation of which of the element a moderate flame temperature are used?
 e) Fe and Ni b) Li and Na c) Mg and Cu d) O and Cl
15. _____ is independent of the flame temperature.
 a) Flame photometry
 b) Atomic absorption spectrophotometry
 c) both (a) and (b)
 d) None of these
16. In AAS, the fast moving ions hit the cathode surface and remove the surface metal atoms by a process called _____.
 a) Sputtering b) nebulization c) desorption d) atomization
17. For most molecules, the electrons are paired in the ground state. Such a state is called the
 . a) Triplet state b) quadrate state c) singlet state d) normal state
18. _____ can be described as the instantaneous re-emission of absorbed light.
 a) Phosphorescence b) fluorescence c) transmittance d) refraction
- 19.. AAS is used to detect _____ like Cu, Ni Zn and Hg in food.
 a) Non-toxic metals b) heavy metals c) toxic metals d) stellar particles

20. Which of the following groups do not have any effect on both fluorescence and phosphorescence?

- a) $-\text{OH}$ and $-\text{NH}_2$ b) $-\text{N}=\text{N}-$ and NO_2 c) $-\text{SO}_3\text{H}$ and $-\text{NH}_4^+$ d) None of these.

Answer key

Question no.	Answer
1	D
2	A
3	C
4	A
5	A
6	A
7	A
8	C
9	A
10	A
11	D
12	A
13	C
14	A
15	C
16	B
17	A
18	A
19	A
20	a