Answer any *five* questions form the following: 2x5=10

1. Calculate the standard error of mean (SEM) from the following data of five burette reading trials:
18.2, 17.9, 18.0, 18.1, 18.1
2. Write differences between precision and accuracy.
3. i) Write four types of optical methods of analysis.
ii) On which law the atomic absorption spectroscopy rely on? State the law.
4. Write the principle of Job's method of continuous variation to obtain the stoichiometry of complex compound.
5. Write the principles of thermogravimetric analysis (TGA).
6. How you can determine the pK_a value of CH_3COOH using the conductometric method of analysis?
7. What is distribution ratio and how it is related to solvent extraction process?
8. Define eluent and eluate in chromatography with examples.