

**S.NO: 22N1-UCH**

**Course Code: BQE3**

**A.D.M.COLLEGE FOR WOMEN, NAGAPATTINAM**

**(AUTONOMOUS)**

**B. Sc. (Chemistry) Degree Examination**

**V Semester – November – 2022**

**MBE I – ANALYTICAL CHEMISTRY**

**Time: 3 hours**

**Maximum Marks: 75**

**Section –A**

**10X2=20**

**Answer ALL the Questions:**

1. Write the first aid for acid in eyes.
2. Name two poisonous chemicals.
3. Define error.
4. What is meant by significant figures? Give an example.
5. Name any two adsorbent in paper chromatography.
6. What is fractional distillation?
7. Write the principle of TGA.
8. What is redox potential?
9. Write the function of phototubes.
10. State Beer-Lambert's law.

**Section -B**

**5X5=25**

Answer **ALL** the Questions:

11. a) Write a note on carcinogenic chemicals.

**(or)**

b) Discuss the storage and handling of corrosive chemicals.

12. a) Discuss the following errors:

i) Instrumental errors      ii) Personal errors

**(or)**

b) Explain in detail about the mean and standard deviation.

13. a) Discuss the principle and uses of solvent extraction.

**(or)**

b) Discuss the principle and applications of thin layer chromatography.

14. a) Explain the nature of DTA curves of calcium oxalate monohydrate.

**(or)**

b) Write the application of electro deposition.

15. a) Discuss the instrumentation of spectrophotometer.

**(or)**

b) Write the colorimetric estimation of iron.

**Section -C**

**3 X 10 = 30**

Answer any **THREE** Questions:

16. i) Give the treatment for the following poisons: phenol, cyanide and Iodine.  
ii) Write the first aid for cut by glasses and heat burns.
17. i) Explain in detail about the accuracy and rejection of data.  
ii) Write a note on random errors.
18. i) Explain paper chromatography and its applications  
ii) Explain Electrophoresis and its applications
19. i) Discuss the factors affecting the TGA and DTA curves  
ii) How will you estimate copper by electro gravimetric method.
20. Explain the principle and techniques used to follow kinetics of fast photochemical reactions.