

S.NO: 120

BATCH: 2017

REG.No.

END OF SEMESTER EXAMINATIONS, APRIL / MAY - 2019  
**ELECTIVE - IV : ANALYTICAL CHEMISTRY**  
SUBJECT CODE: 16P3CH14

MAJOR : M.Sc (CHEMISTRY)  
TIME : 3 HOURS

SEMESTER : IV  
MAX. MARKS : 70

**SECTION - A (10 X 1 = 10)**

Answer ALL questions:

1. Differentiate between accuracy and precision.
2. What is meant by degrees of freedom?
3. How is plasma generated in ICPES?
4. Which electrode is used in potentiometric redox titration?
5. Mention the factors favoring solid state reactions.
6. What is meant by intercalation reactions?
7. Write the significance of computer devices in literature survey.
8. List the secondary sources of literature survey.
9. Bring out the importance of bibliography.
10. What are the aspects of data presentation?

**SECTION - B ( 5 X 4 = 20)**

Answer ALL questions.

11. a) Calculate standard deviation and mean standard deviation for the following set of data:  
139.2, 139.8, 140.1 and 139.4  
(OR)  
b) Write notes on confidence limit.
12. a) Compare wavelength and energy dispersive X-ray fluorescence spectroscopy.  
(OR)  
b) Explain the absorption of X-ray by matter.
13. a) Write the mechanism of ion exchange reactions.  
(OR)  
b) Explain hydrothermal synthesis.
14. a) What do you understand by science citation index?  
(OR)  
b) List few journals in the fields of inorganic and polymer chemistry.
15. a) Explain the importance of foot notes and references.  
(OR)  
b) Outline the aspects of selecting a research topic.

**SECTION - C ( 5 X 8 = 40)**

Answer ALL questions.

16. a) Discuss the types of determinate errors.  
(OR)  
b) Write notes on  
(i) Significant figures  
(ii) Student's 't' test
17. a) Explain the principle and working of secondary ion mass spectrometry.  
(OR)  
b) Describe the principle and types of conductometric titrations.
18. a) Give an account of any two single crystal growth methods.  
(OR)  
b) Write notes on  
(i) Sol-gel method.  
(ii) Chemical precursor method.
19. a) Discuss the types of abstracts and its importance.  
(OR)  
b) Write notes on  
(i) patents.  
(ii) reviews.
20. a) Explain the different aspects of thesis writing.  
(OR)  
b) Outline the general format of research proposal writing.

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