

S.NO. 189

BATCH: 2016, 2017

Reg. No.

END OF SEMESTER EXAMINATIONS, APRIL / MAY - 2018  
**ELECTIVE - II: PHYSICAL METHODS IN CHEMISTRY - I**

MAJOR: M.Sc. (Chemistry)

SUBJECT CODE: 16P3CH08

TIME : 3 HOURS

7

SEMESTER : II  
MAX. MARKS: 70

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

**Answer ALL the Questions:**

1. Define radioactivity.
2. What is meant by labelling?
3. What is DTA?
4. Write any one application of refractrometry?
5. What is plane polarized light?
6. What is ORD?
7. What is AES?
8. What is interference?
9. What is an eluent?
10. Define ion exchange resin.

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

**Answer ALL the Questions:**

11. a) Explain the limitations of activation analysis.  
(OR)  
b) Explain isotopic dilution method.
12. a) Illustrate the principle of thermogravimetry.  
(OR)  
b) Discuss the instrumentation of differential thermal analysis.
13. a) Explain the principle of Nephelometry.  
(OR)  
b) Write a note on circular birefringence.
14. a) Explain the principle of AAS.  
(OR)  
b) Explain ORD spectrometry.
15. a) Illustrate the instrumentation of GC.  
(OR)  
b) Discuss ion exchange chromatography.

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

**Answer ALL the Questions:**

16. a) Explain in detail about liquid scintillation counting analysis.  
(OR)  
b) Discuss on activation analysis by comparator method.
17. a) Discuss thermometric titration with few examples.  
(OR)  
b) Write the theory and applications of refractrometry.
18. a) Explain cotton effect and octant rule.  
(OR)  
b) Write the instrumentation of turbidimetry.
19. a) Write a note on theory of fluorescence and phosphorescence.  
(OR)  
b) Explain the sensitivity and applications of AAS.
20. a) Illustrate the instrumentation of Column chromatography.  
(OR)  
b) Discuss on paper chromatography and its applications.

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