(Pages : 2)

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Reg. No. : .....

Name : .....

Fourth Semester M.Sc. Degree Examination, July 2024

Analytical Chemistry

CL 242 : APPLIED ANALYTICAL CHEMISTRY

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **two** among (a), (b) and (c) from each. **Each** sub question carries **2** marks.

1. (a) What are the radio isotopes used in medicine and explain its importance?
   (b) What is isotope dilution analysis?
   (c) Explain radio pharmacology.
2. (a) What is the principle of colorimetry?
   (b) Explain peroxide number
   (c) Describe one method for crude fiber determination.
3. (a) Explain physiological symptoms of hashish poisoning.
   (b) Write down the remedial measures taken during poisoning of nicotinoids.
   (c) What is DNA finger printing?
4. (a) What are analgesics Give example?
   (b) Write a short note Brix.
   (c) Mention some modern methods of drug analysis.

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5. (a) What is the role of nebuliser in flame photometry?

(b) What type of burners used in flame spectrometry for detection of pesticides?

(c) What is XPS imaging?

(2 × 10 = 20 Marks)

SECTION – B

Answer either (a) or (b) from each question. **Each** sub question carries **5** marks

6. (a) Explain nuclear activation analysis and its principle.

(b) Discuss about DMA analysis.

7. (a) Explain Dumas method.

(b) Describe methods for rancidity determination

8. (a) Give a detailed description of forensic analysis of saliva and urine.

(b) Discuss the classification of poisons.

9. (a) What are anti histamines and antibiotics?

(b) Write on methods for common drug analysis in analgesics of antipyretics.

10. (a) Explain the principle of applications of flame spectrometry.

(b) Discuss plasma emission spectrometry.

(5 × 5 = 25 Marks)

SECTION – C

Answer **any three** questions. **Each** question carries **10** marks.

11. Write short notes on radioactive tracer techniques and autoradiography.

12. Explain Soxhlet method and Gerber method?

13. Discuss DNA Finger printing for tissue identification in dismembered bodies and detecting steroid consumption in athletes.

14. Discuss about estimation of haemoglobin and interpretation of data in biological samples.

15. Explain the theory and instrumentation of X-ray fluorescence.

(3 × 10 = 30 Marks)
